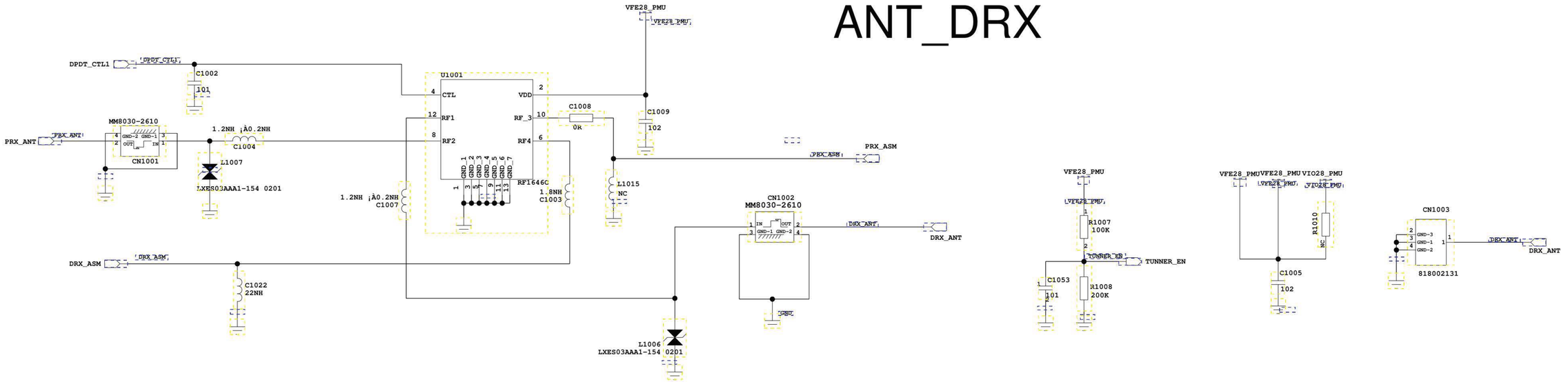
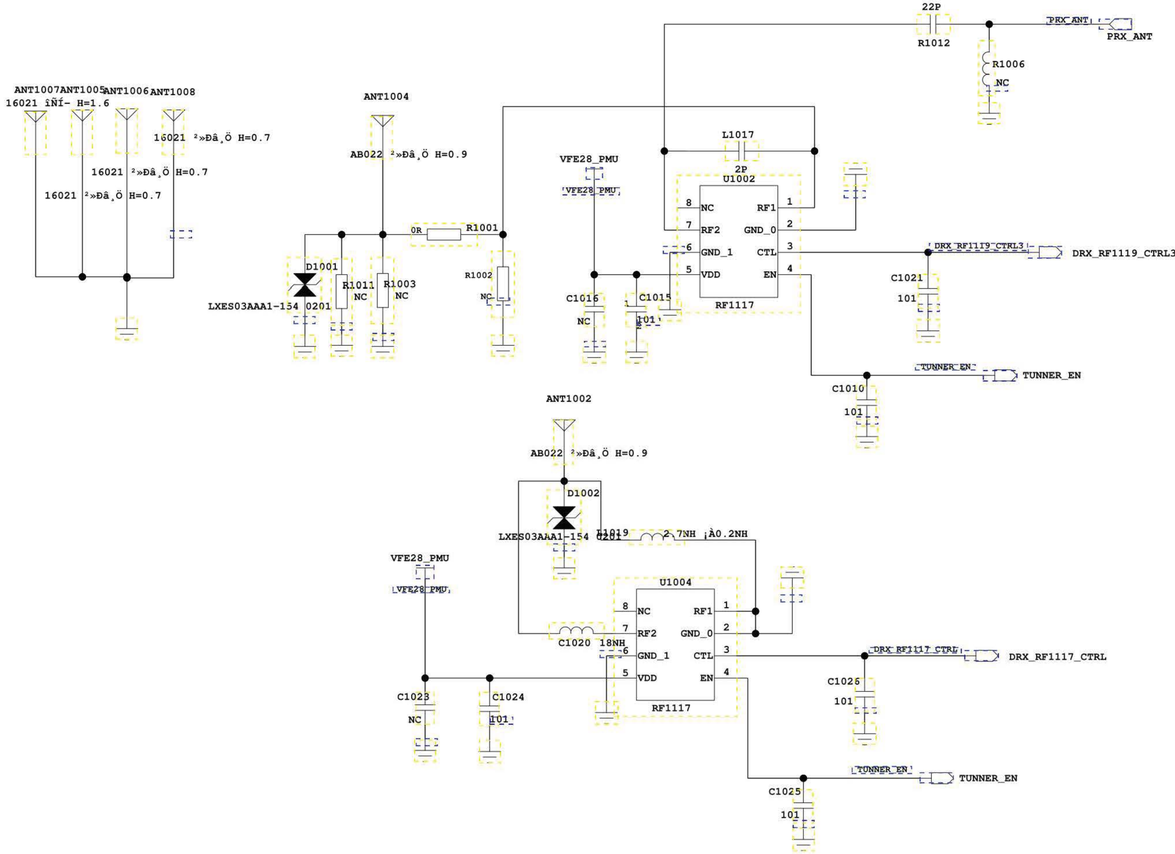
ANT_DRX


VFE28_PMU
DPDT_CTL1
C1002
101
U1001
CTL
RF1
RF2
VDD
RF_3
RF4
C1008
0R
C1009
102
MM8030-2610
PRX_ANT
1.2NH ¡À0.2NH
C1004
CN1001
L1007
LXES03AAA1-154 0201
1.2NH ¡À0.2NH
C1007
RF1646C
1.8NH
C1003
PRX_ASM
L1015
NC
CN1002
MM8030-2610
DRX_ANT
DRX_ASM
C1022
22NH
L1006
LXES03AAA1-154 02D1
GND
R1007
100K
TUNNER_EN
C1053
101
R1008
200K
VFE28_PMU VFE28_PMU VIO28_PMU
R1010
NC
C1005
102
CN1003
GND-3
GND-1
GND-2
818002131


22P
R1012
PRX_ANT
R1006
NC
ANT1007ANT1005ANT1006ANT1008
16021 ¡ÑÍ- H=1.6
16021 ²»Ðã¸Ö H=0.7
16021 ²»Ðã¸Ö H=0.7
16021 ²»Ðã¸Ö H=0.7
ANT1004
AB022 ²»Ðã¸Ö H=0.9
0R
R1001
D1001
LXES03AAA1-154 0201
R1011
NC
R1003
NC
R1002
NC
L1017
2P
U1002
VFE28_PMU
NC
RF1
RF2
GND_0
GND_1
CTL
VDD
EN
RF1117
C1016
NC
C1015
101
DRX_RF1119_CTRL3
DRX_RF1119_CTRL3
C1021
101
TUNNER_EN
TUNNER_EN
C1010
101
ANT1002
AB022 ²»Ðã¸Ö H=0.9
D1002
LXES03AAA1-154 0201
R1019
2.7NH ¡À0.2NH
U1004
VFE28_PMU
C1020
18NH
DRX_RF1117_CTRL
DRX_RF1117_CTRL
C1026
101
C1023
NC
C1024
101
TUNNER_EN
TUNNER_EN
C1025
101
ANT1003
AB022 ²»Ðã¸Ö H=0.9
D1003
R1013
0R
LXES03AAA1-154 0201
VFE28_PMU
R1005
10NH
L1001
0R
U1003
RF1
RF2
GND1
VDD
RF3
RF4
GND2
EN
CTL1
CTL2
RF1119A
L1002
15NH
C1001
18NH
TUNNER_EN
TUNNER_EN
C1017
101
C1018
NC
C1006
101
DRX_RF1119_CTRL1
DRX_RF1119_CTRL1
DRX_RF1119_CTRL2
DRX_RF1119_CTRL2
C1014
101
C1013
101

MMMB PA

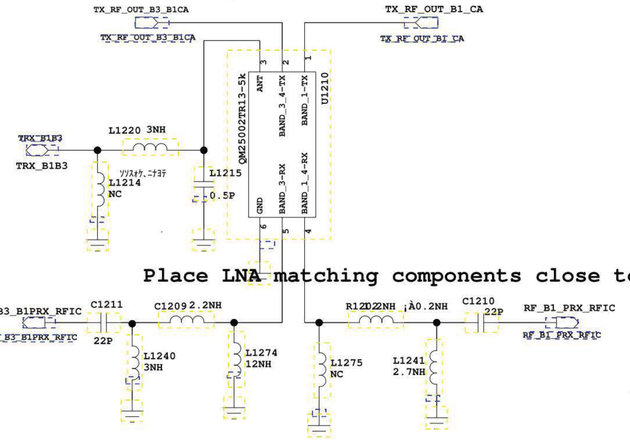
PRX_G900
R1116 1.8NH
C1131 NC
C1129 NC
Z1104 IN/OUT OUT/IN GND1 GND0 LF1608- LR91NDA
ヤ、チミミへへ酒ャキスフ羞ヤOBB TEST
C1168 6.8NH
C1169 47NH
C1141 10NH ¡Å5%
C1170 101
G900_Sawless_PRX_RFIC

VBAT_RST
80mil 2mm
C1108 10P
C1122 104
C1124 106
D1101 VS4V5EU1C3 RAN1006
C1107 6.3V 226 X5R 0603 T¡Ü1.25
CE1101
MIPI1_SCLK
MIPI1_SDATA
VIO18_PMU
LTE_APC1
R1106 10K 1%
APCメェーリ」。
R1107 NC
C1121 102
C1114 10P
C1116 10P
C1112 221
SKY77927-11 PAM U1108
VIO SCLK SDATA VRAMP ANT CPL NC_0 NC_1 GND_0..GND_14 VCC VBATT
MH_TRX_9..MH_TRX_1
TRX_RF_OUT_B41 TRX_RF_OUT_B40 PRX_B39_DCS_PCS B38_B41_PRX TRX_B2_G1900 PRX_B40 TX_RF_OUT_B39 TRX_B1B3 TRX_B3B7
B7ハケモTRX9
L_TRX_7..L_TRX_1
PRX_G900 TRX_B28B TRX_B20 TRX_B5_G850 TRX_B28A TRX_B8_G900
LB_SWOUT LB_IN MB_IN MB_SWOUT
39ソレク12B17ハケモテ」ャシモB1 notch
C1165 0R
C1115 33P RF_LB3_TX_RFIC
L1139 NC
L1140 NC
C1130 NC
C1149 0R
C1110 33P RF_MB3_TX_RFIC
L1115 NC
PRX_ASM
C1100 1.2NH ¡À0.2NH
L1126 NC
L1110 NC
R1110 1/20W18¦
RF_TXDET1_RFIC
C1101 101
R1109 1/20W18¦
R1111 68R
ム。モテSKY77927-11」ャ9130074
SKY QROVOカシヒ・シdB

TX_RFOUT_B20
TX_RFOUT_B5
TX_RFOUT_B8
TX_RFOUT_B28A
TX_RFOUT_B28B
L1123 3NH ¡À0.2NH
TX_RF_OUT_B3_B1CA
C1103 1P
C1104 15NH
C1185 0R
TX_RF_OUT_B1_CA
L1152 6.2NH
L1153 NC
C1152 2.7NH ¡À0.2NH
L1121 1.2P
C1143 NC
Z1102 BF1608-L1R9NDBT/LF IN/OUT OUT/IN GND1 GND0 GND
TX_RF_OUT_B39
RF_LB1_TX_RFIC
C1174 33P
L1138 3.1NH
C1149 3.3P
C1148 3.3P
RF_MB2_TX_RFIC
C1153 33P
L1120 3.9NH
C1157 1P
C1158 1P
VIO18_PMU VPH_PWR VFE_PWR
R110310R
MIPI0_SCLK MIPI0_SDATA
C1133 10P C1132 10P C1127 106 C1142 225 C1126 101 C1134 102
QM56022 U1101
GND_4 RFIN_L2 RFIN_L1 RFIN_M NC_2 NC_1 NC_0 VBATT VIO SCLK SDATA NC_3 RFIN_H GND_1 GND_0
LB4 LB3 LB2 LB1 LB5 MB1 GND_5 MB2 GND_6 MB3 MB4 GND_7 VCC2_2 VCC1 VCC2 GND_8 MB5 HB1 GND_9 HB2 GND_10
GND_13 HBRX2 HBRX1 GND_12 HB4 GND_11 HB3
VPA_PMU
C1135 101 C1136 105 C1137 101 C1138 105 C1139 101 C1140 105
C1151 2.2NH
L1123 NC
C1145 NC
TX_RF_OUT_B2
C1176 2.2NH
L1141 NC
L1154 NC
TX_RF_OUT_B3_B7CA
L1114 1.2NH ¡À0.2NH
TX_RF_OUT_B7
C1125 NC
C1118 NC
RF_HB2_TX_RFIC
C1144 18P
L1119 3.3NH ¡À0.2NH
C1155 1.2P
C1156 1.2P
Z1101 9050538 INPUT OUTPUT GND-2 GND-3 GND-1 SAFFB2G35MA0F0A
C1164 18P
L1124 NC
L1127 NC
L1122 3.3NH ¡À0.2NH
L1109 3.6NH
C1117 22P
C1119 NC
TRX_RF_OUT_B40
Z1103 SAFFB2G59MA3F0A INPUT OUTPUT GND-2 GND-3 GND-1 GND
L1102 1.2NH ¡À0.2NH
C1106 NC
L1105 NC
L1103 3.6NH ¡À0.2NH
L1125 2NH ¡À0.2NH
L1116 8.2NH
L1104 NC
TRX_RF_OUT_B41

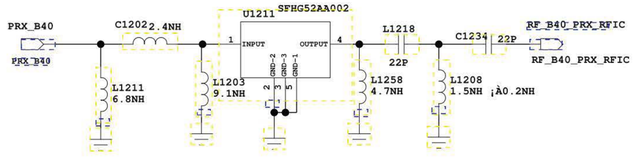
VFE28_PMU
8mil
C1111 105
VIO18_PMU
C1120 105
R1104 390K¡Å1%
ソソスAキナヨテ
AUX_IN1_NTC
RT1101 NTC 100K¡Å1% B:4250K 0402
C1105 105
VPA_PMU
10mil
50mil
C1175 105
C1123 225
MTKイキシノ国ニンタ記ンンチヒVBTjャキキキママトワキサンタ記ン
IEネ自動ンイミミミミきテ゛マ゛

B1B/B3B/B4 CA TRX

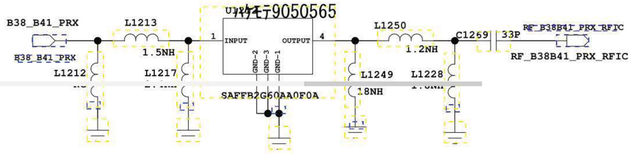


Place LNA matching components close to MT6177

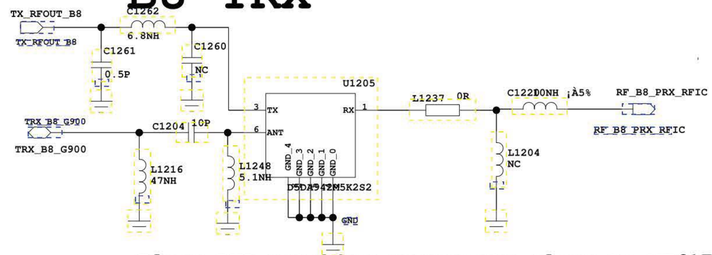
PRX B40



B38/B41 PRX

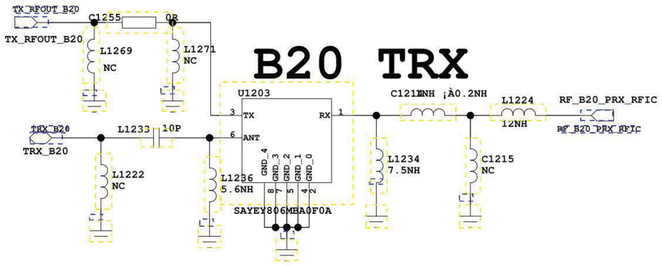


B8 TRX

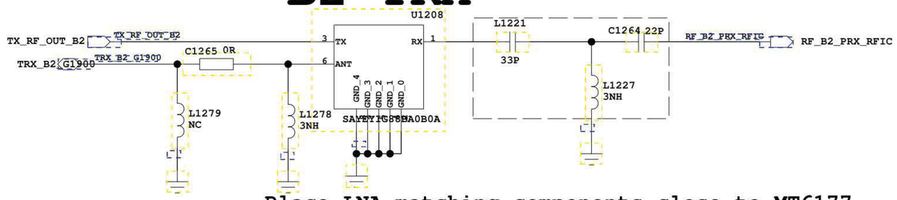


Place LNA matching components close to MT6177

B20 TRX

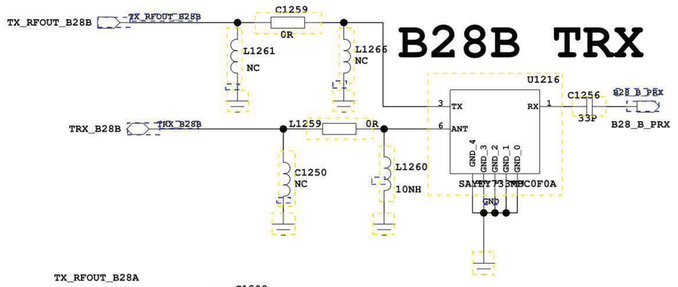


B2 TRX

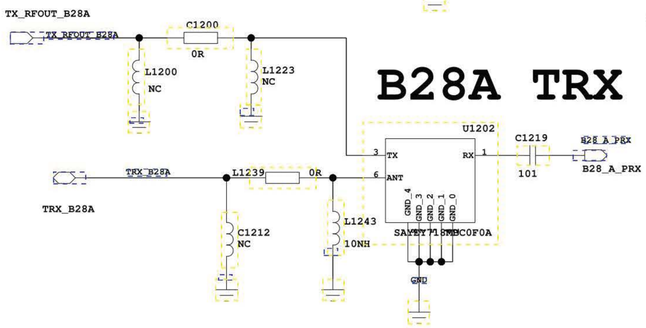


Place LNA matching components close to MT6177

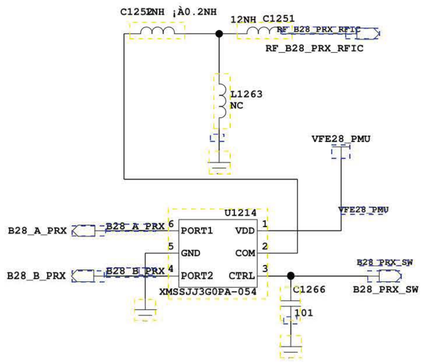
B28B TRX



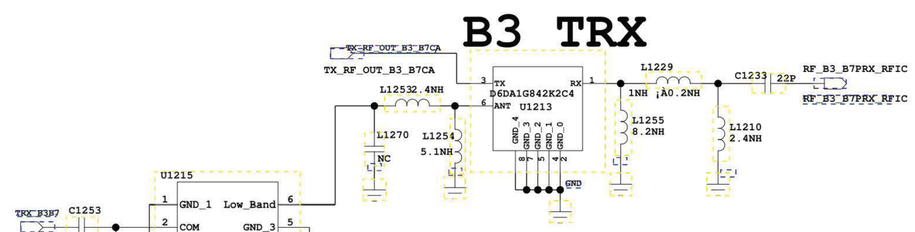
B28A TRX



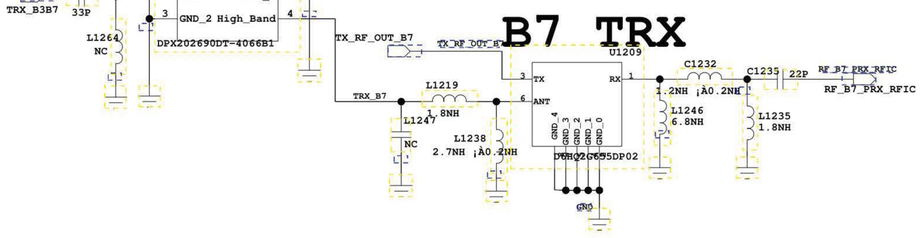
Place LNA matching components close to M



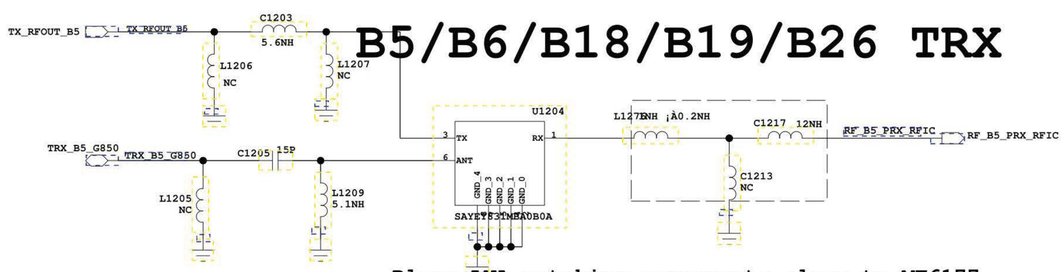
B3 TRX



B7 TRX

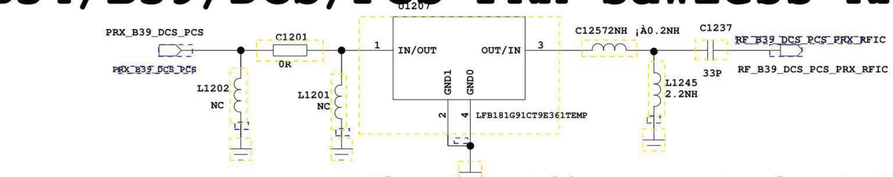


B5/B6/B18/B19/B26 TRX



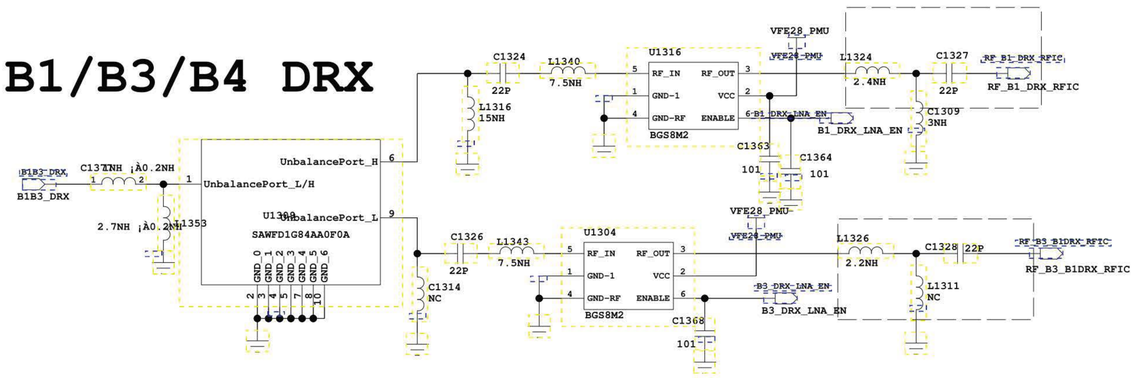
Place LNA matching components close to MT6177

B34/B39/DCS/PCS PRX sawless RX

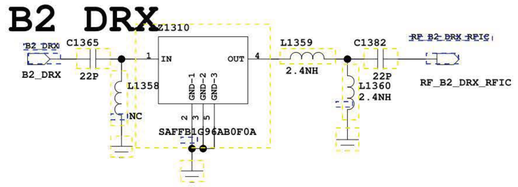


Place LNA matching components close to MT6177

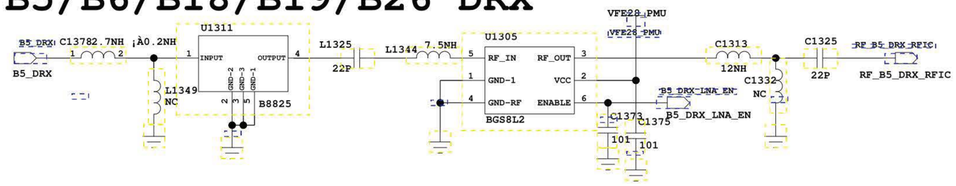
B1/B3/B4 DRX



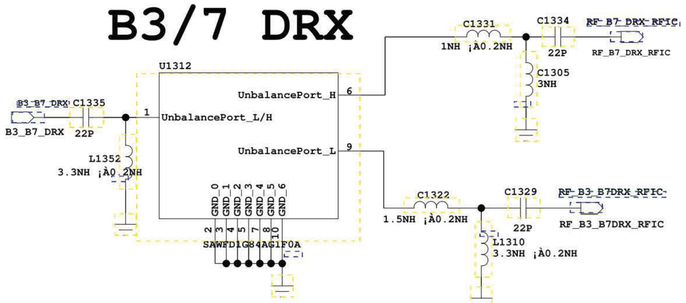
B2 DRX



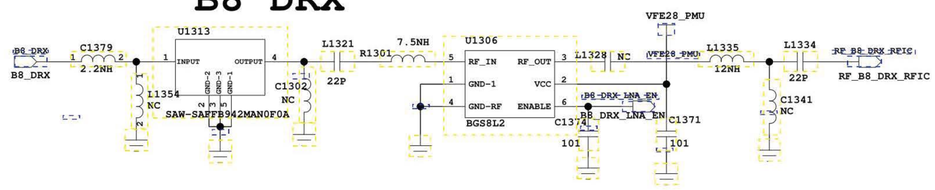
B5/B6/B18/B19/B26 DRX



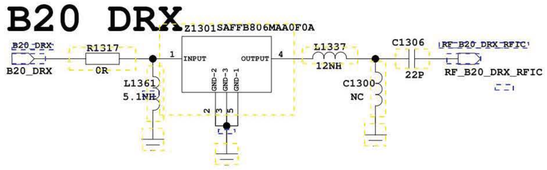
B3/7 DRX



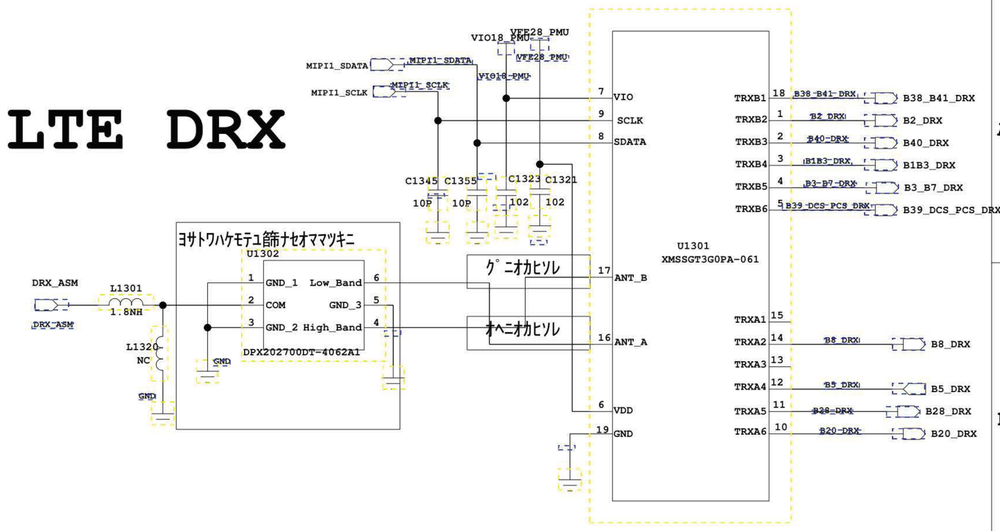
B8 DRX



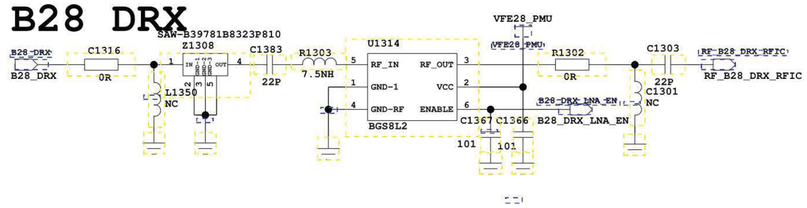
B20 DRX



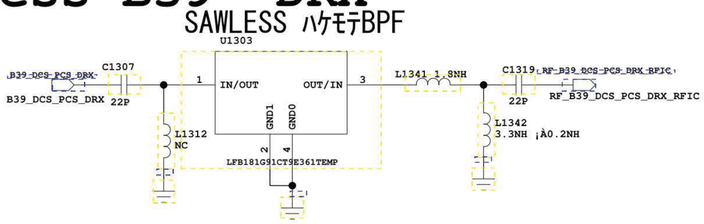
LTE DRX



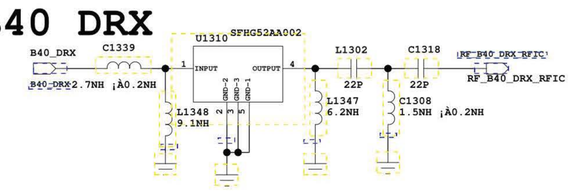
B28 DRX



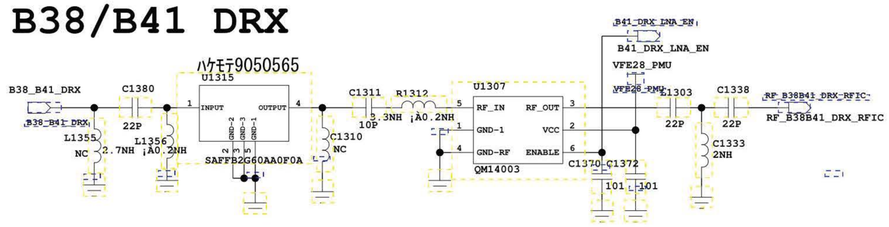
SAWless B39 DRX



B40 DRX



B38/B41 DRX



MT6177

U1401

MT6177W/A

RF_B8_DRX_RFIC
RF_B5_DRX_RFIC
RF_B28_DRX_RFIC
RF_B20_DRX_RFIC
RF_B39_DCS_PCS_DRX_RFIC
RF_B3_B7DRX_RFIC
RF_B3_B1DRX_RFIC
RF_B1_DRX_RFIC
RF_B7_DRX_RFIC
RF_B40_DRX_RFIC
RF_B2_DRX_RFIC
RF_B38B41_DRX_RFIC

DRX: LAAD1, DRX14, DRX13, DRX12, DRX11, DRX10, DRX9, DRX8, DRX7, DRX6, DRX5, DRX4, DRX3, DRX2, DRX1

PRX: LAAP1, PRX14, PRX13, PRX12, PRX11, PRX10, PRX9, PRX8, PRX7, PRX6, PRX5, PRX4, PRX3, PRX2, PRX1

RF_B7_PRX_RFIC → RF_B7_PRX_RFIC
RF_B2_PRX_RFIC → RF_B2_PRX_RFIC
RF_B1_PRX_RFIC → RF_B1_PRX_RFIC
RF_B40_PRX_RFIC → RF_B40_PRX_RFIC
RF_B38B41_PRX_RFIC → RF_B38B41_PRX_RFIC
RF_B3_B7PRX_RFIC → RF_B3_B7PRX_RFIC
RF_B3_B1PRX_RFIC → RF_B3_B1PRX_RFIC
RF_B39_DCS_PCS_PRX_RFIC → RF_B39_DCS_PCS_PRX_RFIC
RF_B28_PRX_RFIC → RF_B28_PRX_RFIC
RF_B5_PRX_RFIC → RF_B5_PRX_RFIC
RF_B20_PRX_RFIC → RF_B20_PRX_RFIC
RF_B8_PRX_RFIC → RF_B8_PRX_RFIC
G900_Sawless_PRX_RFIC → G900_Sawless_PRX_RFIC

RX Port	Band	Min. freq (MHz)	Max. freq (MHz)
PRX1/DRX1--PRX8/DRX8	LB,MB	LB: 600	MB: 2,025
PRX9/DRX9--PRX12/DRX12	MB,HB	MB: 1,805	HB: 2,690
PRX13/DRX13--PRX14/DRX14	MB/HB/UHBMHB: 2,350	UHB: 3,800	
LAAP1/LAAD1	5G	5,000	6,000

Sawless Port: Support 2G (1800/1900) and TDS/LTETDD (B34,B39) at PRX6(2G/TDS/LTE)+DRX6(LTE)
(B39 at PRX14 for special CA operation (China SKU single ant))

1 ﾋﾐﾈｵﾄRXｽﾋﾋﾌﾚﾐ髄ｺﾝﾍｸｱｵ酋鯵ﾝ
2 ｲﾀﾓﾋｵｽﾄﾄRXｽﾋﾋﾌﾚｮﾐﾕﾝｴﾚﾝﾉ

B28ﾔﾚA/BﾔﾚｲﾏﾍﾔｷﾄkgroupﾈﾃｵｽMTKｷﾏﾝﾉｺｬｲｵﾝDCD11

TX_UHB G12
TX_HB1 G11
TX_HB2 H11 — RF_HB2_TX_RFIC → RF_HB2_TX_RFIC
TX_MB1 J11
TXO TX_MB2 J12 — RF_MB2_TX_RFIC → RF_MB2_TX_RFIC
TX_MB3 K12 — RF_MB3_TX_RFIC → RF_MB3_TX_RFIC
TX_LB1 K11 — RF_LB1_TX_RFIC → RF_LB1_TX_RFIC
TX_LB2 L11
TX_LB3 M11 — RF_LB3_TX_RFIC → RF_LB3_TX_RFIC
TX_LB4 M12
TXDET1 M7 — RF_TXDET1_RFIC → RF_TXDET1_RFIC

1 TXLB1_LB4 638MHz_915MHz GSM LB3ﾔﾄｳTXLB3
2 TXMB1_MB3 1428MHz_2025MHz GSM HB3ﾔﾄｳTXMB3
3 TXHB1ﾌﾄTXHB2 2300MHz_3800MHz
4 TXUHB B22,B42
5 ﾋﾐﾈﾄTXｽﾋﾋﾌﾚﾐ髄ｺｳｱﾆﾗﾀ

input level=-40dBm～0dBm
ｹﾗﾌﾝﾊﾉ翼ﾞﾌﾛﾊﾇqorvoｻﾌﾊﾇskyworksﾈﾄPAﾍｳﾒﾊﾝﾓｳｱｵ酋鯵ﾝﾌﾍ6dBﾋ･ﾝ

Power:
VDD_TXHV N8 — 225ma Max
VDD_SXLF N5 — 40ma Max
VDD_SXLV K5 — 15ma Max
VDD_RXLV E6 — 165ma Max
VDD_RXHV E7 — 145ma Max
VIO J2 — 12ma Max

VIO18_PMU VRF18_PMU VRF12_PMU VRF12_PMU VRF18_PMU VRF18_PMU

C1411 104 VIO18_PMU
C1412 104 VRF18_PMU
C1413 104 VRF12_PMU
C1414 104 VRF12_PMU
C1415 104 VRF18_PMU
C1416 104 VRF18_PMU
Bypass cap ﾐ髄ｺｴﾝﾝｽT6177ｷｷﾖﾃ

XOI J1 PMIC_CLK_RF — PMIC_CLK_RF
EN_BB H4 SRCLKENA1 — SRCLKENA1
TMEAS G1
RCAL H1

R1407 2K 1% — RT1401 ※.ｷ鋼ﾝNTC Debug — NC

GND

BSI: BSI_O_EN, BSI_O_CK, BSI_O_D0, BSI_O_D1, BSI_O_D2

RFIC0_BSI_D1
RFIC0_BSI_D0
RFIC0_BSI_CK
RFIC0_BSI_EN

DETIF: DET_IP0, DET_IN0, DET_QP0, DET_QN0

LTE_DET_BB_QN0
LTE_DET_BB_QP0
LTE_DET_BB_IN0
LTE_DET_BB_IP0

DRX(I/Q): DRX_BB_Q1, DRX_BB_I1, DRX_BB_Q0, DRX_BB_I0

LTE_DRX_BB_I0
LTE_DRX_BB_Q0
LTE_DRX_BB_I1
LTE_DRX_BB_Q1

PRX(I/Q): PRX_BB_Q1, PRX_BB_I1, PRX_BB_Q0, PRX_BB_I0

LTE_PRX_BB_I0
LTE_PRX_BB_Q0
LTE_PRX_BB_I1
LTE_PRX_BB_Q1

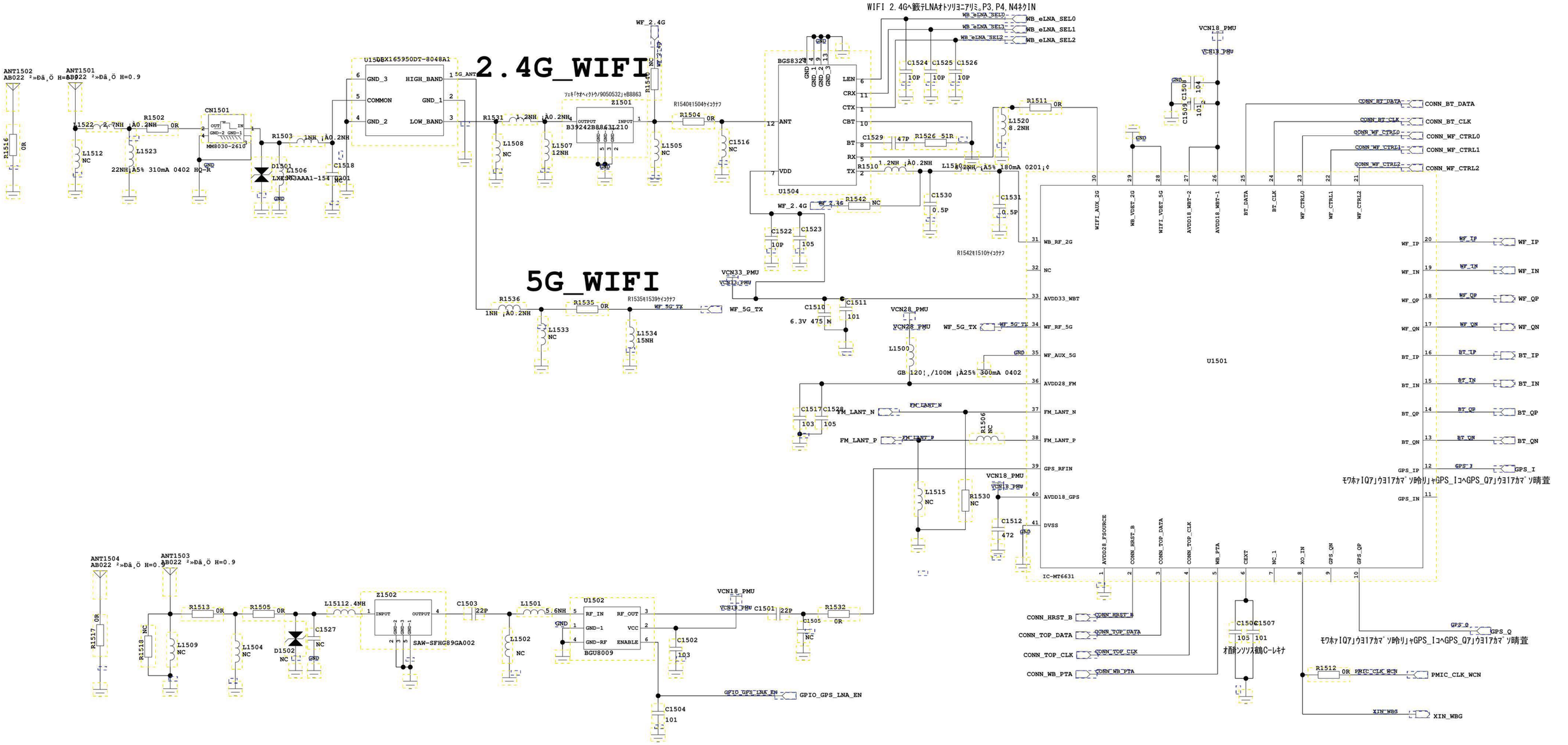
TX(I/Q): TX_BB_QN0, TX_BB_QP0, TX_BB_IN0, TX_BB_IP0

LTE_TX_BB_IP0
LTE_TX_BB_IN0
LTE_TX_BB_QP0
LTE_TX_BB_QN0

GND: GND-36, GND-7, GND-16, GND-18, GND-19, GND-27, GND-33, GND-38, GND-39, GND-28, GND-49, GND-50, GND-51, GND-52, GND-53, GND-54, GND-55, GND-42, GND-59, GND-60, GND-56, GND-57, GND-58, GND-10, GND-8, GND-40, GND-66, GND-61, GND-67, GND-62, GND-26, GND-63, GND-64, GND-65, GND-25, GND-24, GND-22, GND-34, GND-23, GND-45, GND-37, GND-6, GND-5, GND-4, GND-3, GND-21, GND-9, GND-68, GND-2, GND-1, GND-14, GND-42, GND-13, GND-12, GND-43, GND-41, GND-46, GND-30, GND-31, GND-11, GND-17, GND-20, GND-29, GND-32, GND-35, TXO_GND-3, TXO_GND-1, TXO_GND-4, TXO_GND-2

VRF18_PMU
VRF18_PMU
VRF18_PMU
VRF18_PMU
C1417 475
VRF12_PMU
VRF12_PMU
VRF12_PMU
VRF12_PMU
C1418 475 GND
VIO18_PMU
VIO18_PMU
VIO18_PMU

IQﾐﾅﾅﾏﾞｸｺﾔﾘｵ酋鯵ﾝﾒｪﾇｺ
Non-CAｷｽｰｸ」ｬBandwith。ﾜ20MHz」ｬｸｺﾔﾘｵ酋鯵ﾝ」ｼ20pF
CAｷｽｰｸ」ｬBandwith」ｾ20MHz」ｬｸｸﾔﾘｵ酋鯵ﾝ」ｼ15pF
×ÜÏß³¤²»³¬¹ý50mm,Ïß¿í¿ÉÒÔÎª0.06mm



GPS_AVDD18 20mA£º10mil

WB_AVDD18 50mA£º12mil

VCN18_PMU 80mA£º15mil

VCN33_PMU 300mA£º25mil

VCN28_PMU 20mA£º10mil

IQÏß³É¶Ô°üµØ£¬£¨7£¬40£©mm

VCN33ÐèÒª20mil¿í£¬³¤¿í±ÈÐ¡ÓÚ310£¬¹ý¿×Á½¸öÔÔÉÏ

VCN33ÐèÒª°´ÕÕ300mA PeakµçÁ÷À´ÆÀ¹À

VCN33µçÔ´¿í¶È²»ÂúãÒªÇó»áµ¼ÖÂWIFI TX POWER²»×¼or EVM¶ñ»¯

Note 16-1:C1681 closed to DVDD18_MSDC0 150mil
C1680 closed to DVDD18_MSDC1 150mil
Note 16-2:C1679 closed to DVDD28_MSDC1 150mil
Note 16-3:Connects"AVDD09_SSUSB"to GND when USB3.0 is
Note 16-4:Connects"AVDD09_UFS"to GND when UFS is not

MT6771-SBS

VMODEM
VGPU
VCORE
VGPU SRAM
VPROC1
VCORE SRAM
VPROC1 SRAM
VDD2
VPROC2
VDDQ
VPROC2 SRAM

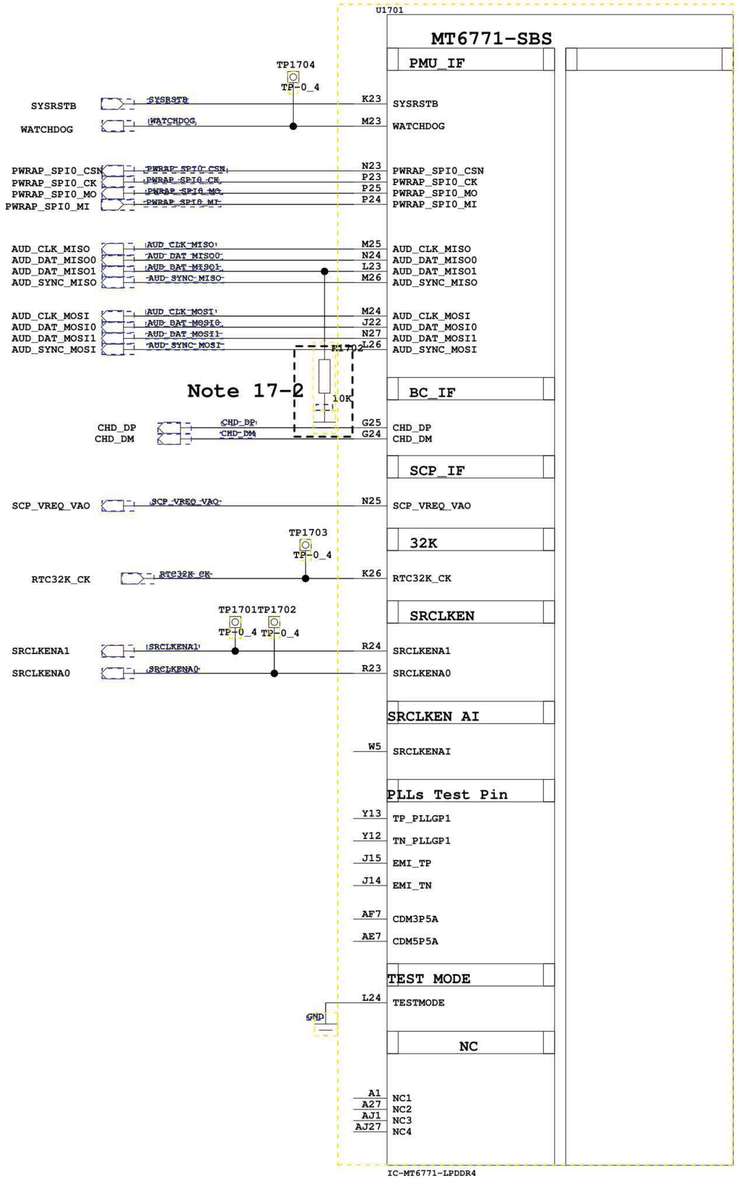
C1639 C1641 MTK²Î¿¼ÆÈë¼ÆÊ¹ÓÃ0603 106µçÈÝ
Ê¹ÓÃ0402 225+0402 106µçÈÝÏæ´ú0603 106

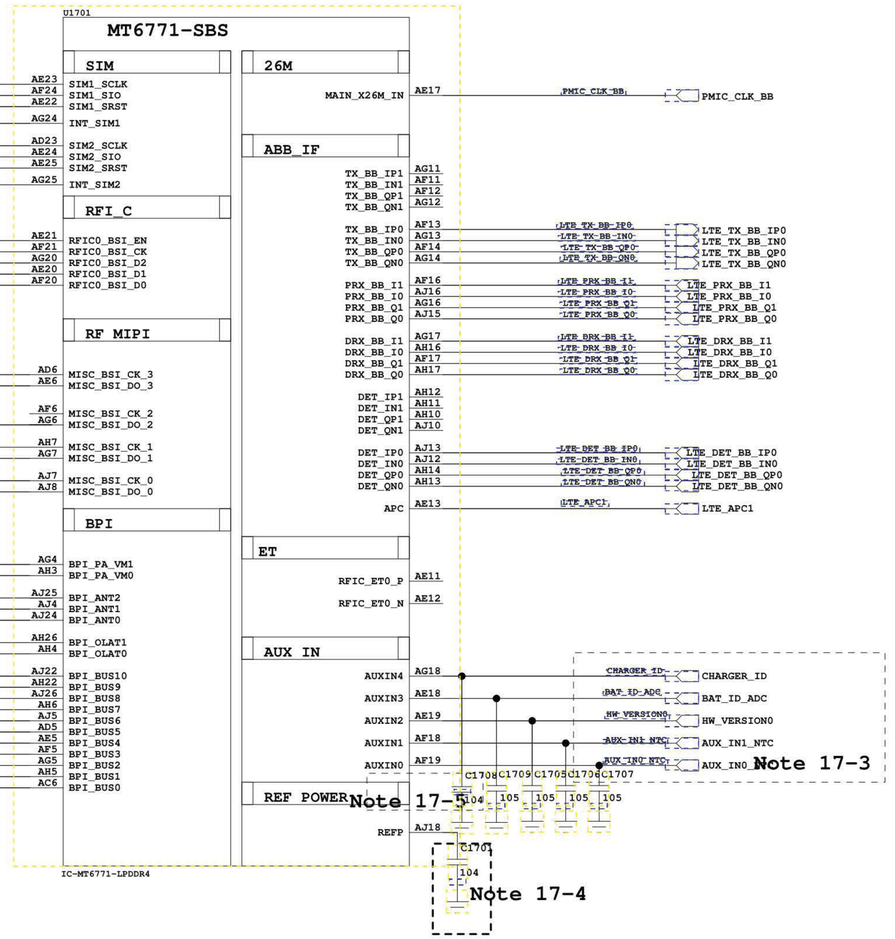
C1620 MTK²Î¿¼ÆÈë¼ÆÊ¹ÓÃ0603 106µçÈÝ
Ê¹ÓÃ0402 225+0402 106µçÈÝÏæ´ú0603 106

Note 16-5: Bellow MT6771 AVDD18 need connect from PMIC VIO18 ball to AP AVDD18_xxx ball in two group directly
Group#1: AVDD18_MD, AVDD18_AP, AVDD18_WBG
Group#2: AVDD18_USB, AVDD18_SSUSB, AVDD18_PLLGP, AVDD18_UFS

Note 16-6: Bellow MT6771 AVDD12 need connect from PMIC VA12 ball to AP AVDD12_xxx ball in two group directly
Group#1: AVDD12_MD,AVDD12_DSI,AVDD12_USB,AVDD12_UFS
Group#2: AVDD12_CSI,AVDD12_PLLGP,AVDD12_WBG

Note 16-1
Note 16-2
Note 16-3
Note 16-4





Note 17-3£º

To shunt a 1uF capacitor in the AUXIN ADC input to prevent noise coupling
It should be placed as close to BB as possible. Connect the unused AUX ADC input to GND.

Note 17-4£º

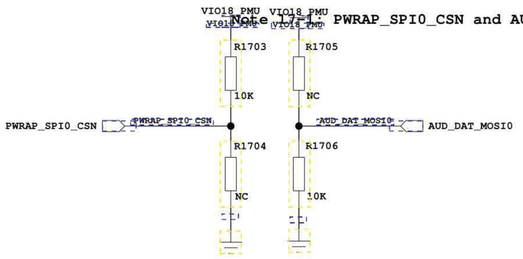
The de-coupling cap. for REFP (AG18 ball) have to be placed as close to BB as possible.

Note 17-5£º

CHARGER_IDµçÈÝÊ¹ÓÃ105µçÈÝ»áµ¼ÖÂ²å³äµçÆ÷Ê±ADC¶ÁÈ¡¾«¶È¡£¬´Ë´¦ÌØ»»³É104µçÈÝ

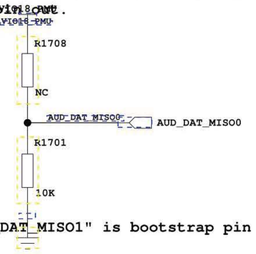
Note 17-2:

"AUD_DAT_MISO0" is bootstrap pin to enable serial JTAG output over USB2.0 interface or ont.
When "AUD_DAT_MISO0" is pluued to high in system start up and then USB2.0 interface will be swithec into serial JTAG mode.



Note 17-1: PWRAP_SPI0_CSN and AUD_DAT_MOSI are bootstrap pin to slect which interface will be the JTAG pin out.

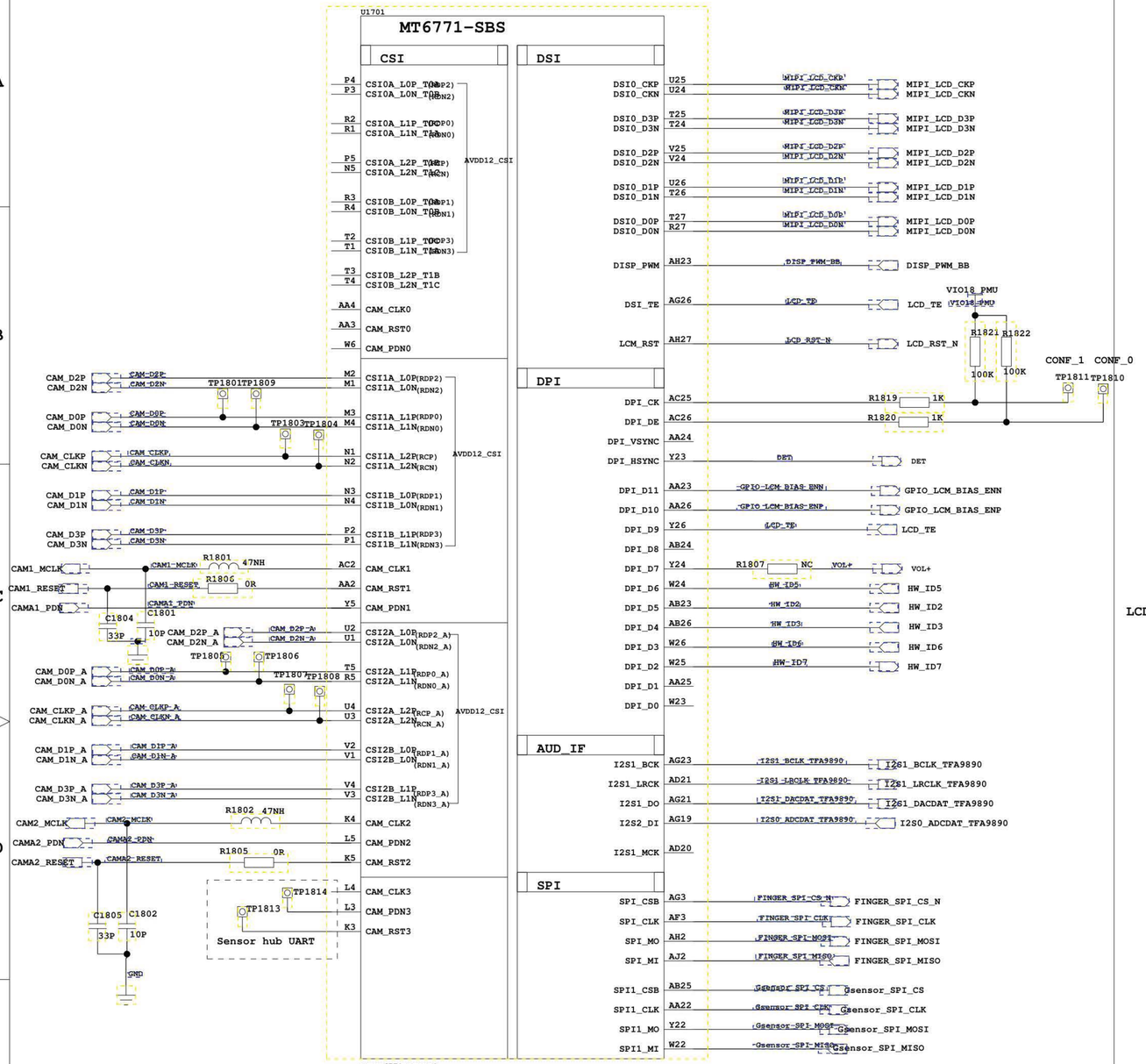
PWRAP_SPI0_CSN	AUD_DAT_MOSI0	AP_JTAG	IO_JTAG
HI	LO	N/A£¨Default£©	N/A£¨Default£©
HI	HI	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	DPI_11/DPI_HSYNC/DPI_VSYNC DPI_DE/DPI_CK/DPI_D8/DPI_D9
LO	LO	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	N/A£¨Default£©
LO	HI	MSDC1_CLK/MSDC1_CMD/MSDC1_DAT0 /MSDC1_DAT1/MSDC1_DAT2	N/A£¨Default£©

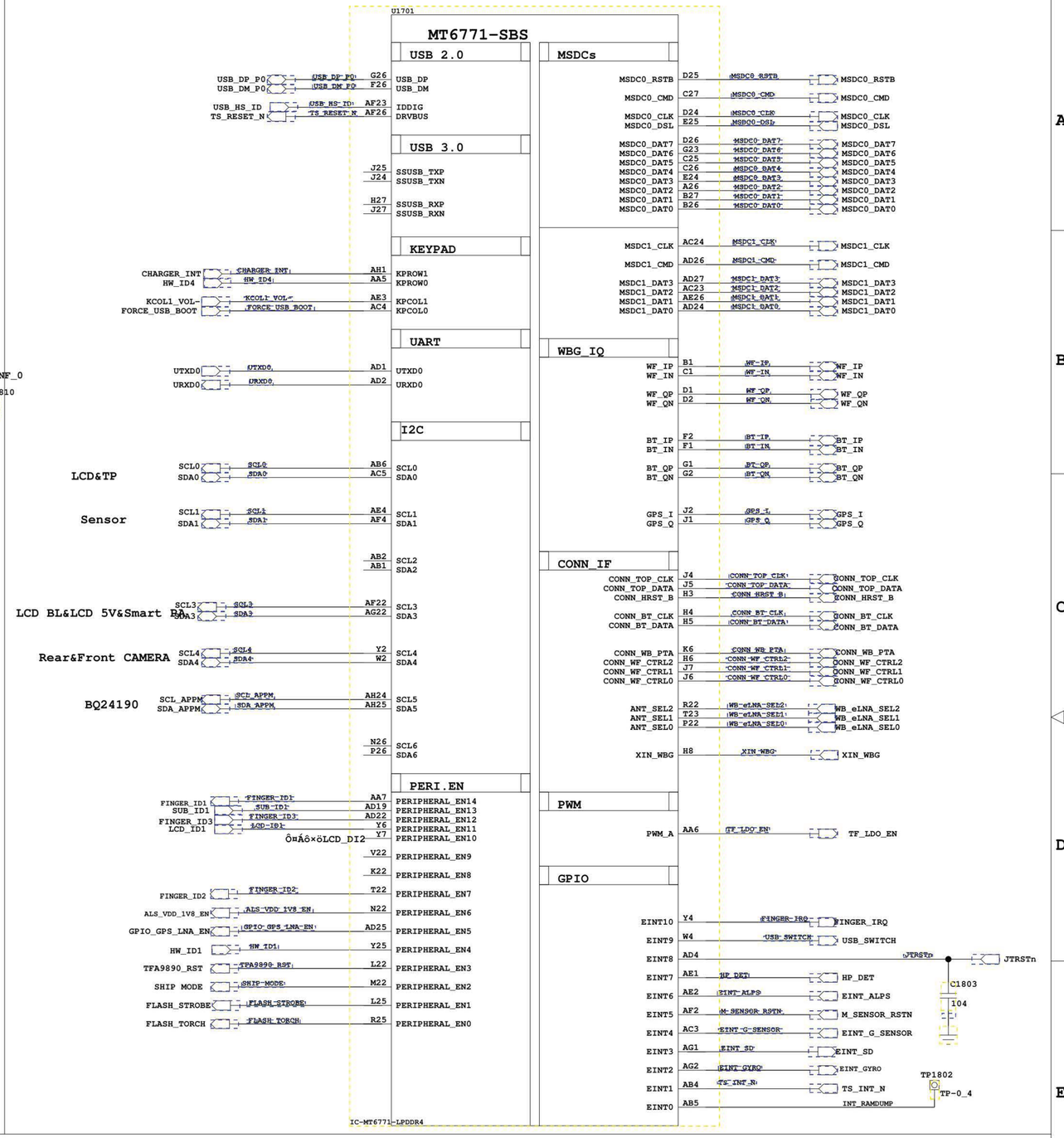


AUD_DAT_MISO0	USB/JTAG
LO	USB2.0
HI	DP/DM output JTAG

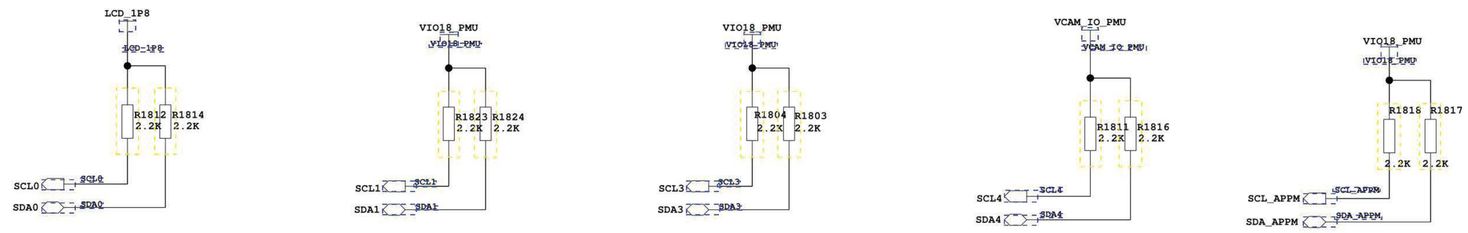
"AUD_DAT_MISO1" is bootstrap pin to select system booting up from eMMC or UFS device.

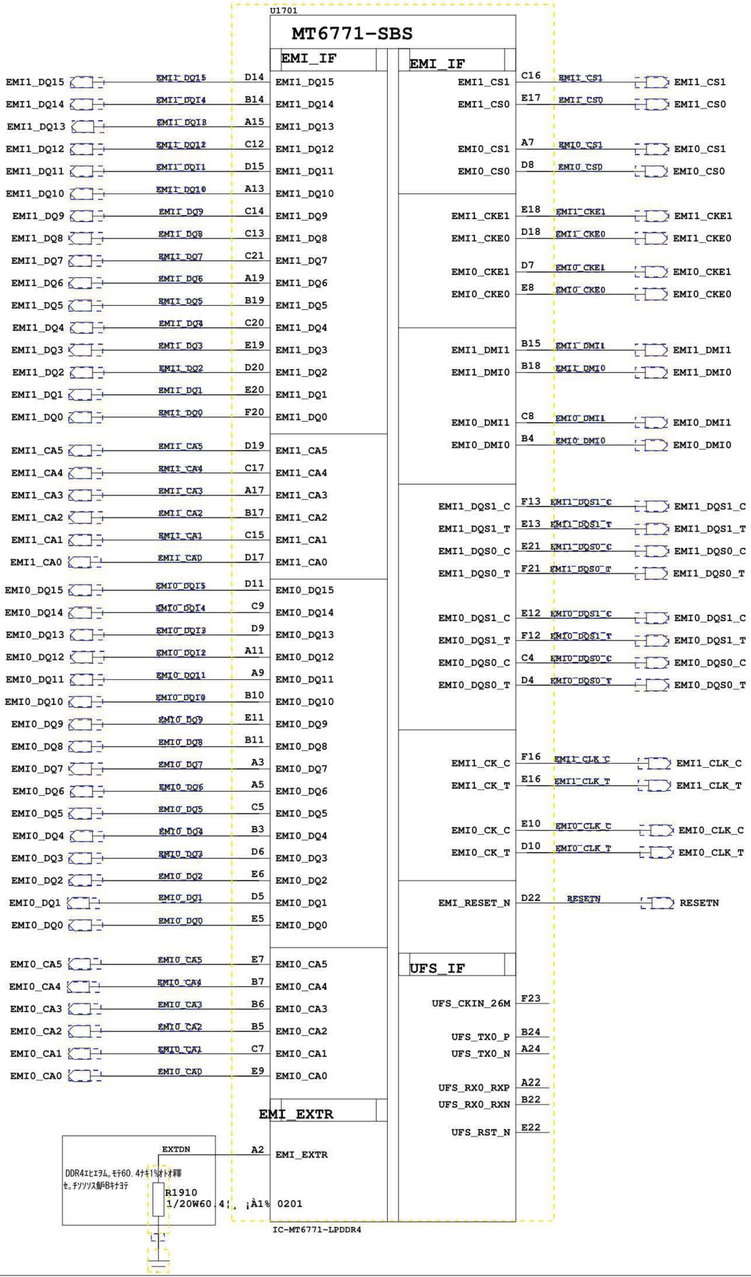
AUD_DAT_MISO1	Booting device
LO	eMMC
HI	UFS





MT6771 I2Cトレイソモミノマタュ」ャへ笳ソノマタュヤ、チ



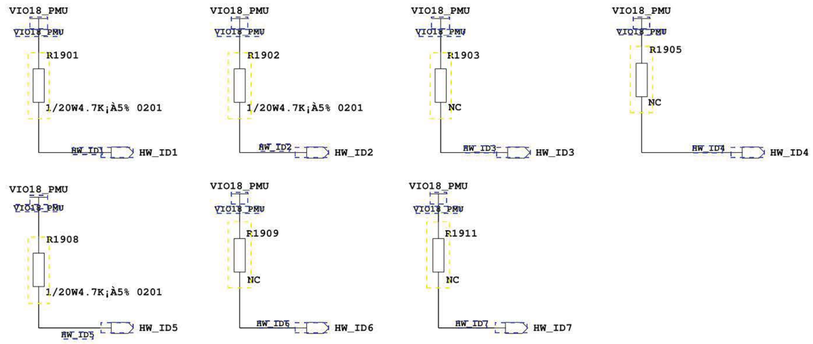


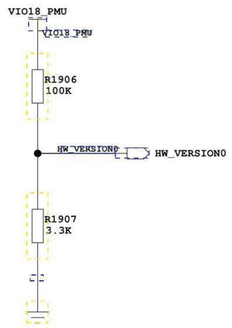
ﾖﾆﾊｽ	HW_ID1 GPIO68	HW_ID2 GPIO66	HW_ID3 GPIO65
ﾑﾇﾌｫｰ	0	0	0
EVB	0	0	1
ﾈｫﾆｵｶﾎ	0	1	0
ﾈｫﾆｵｶﾎｸﾟﾅ	0	1	1

ﾉ蒂ｵｵﾚｶﾗﾊﾔｴ	HW_ID6 GPIO92	HW_ID5 GPIO50
ﾋﾜｽｺﾑﾇﾌｫｰ		1
ﾋﾜｽｺｶ曹ﾞﾋｹｰ		1
ﾋﾜｽｺｶ曹ﾞﾋｹｸﾟﾅ英		1

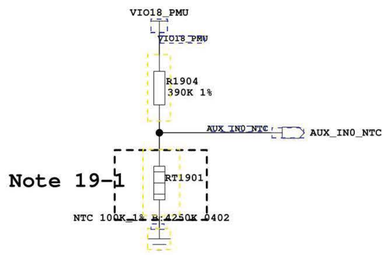
GPIOﾅ葷ﾃﾊ菠ﾂﾀｭ

ﾗOMﾊｱﾗ「ﾒ筌ｬﾒｴNCｲｻﾍｬｵﾄｵ釋



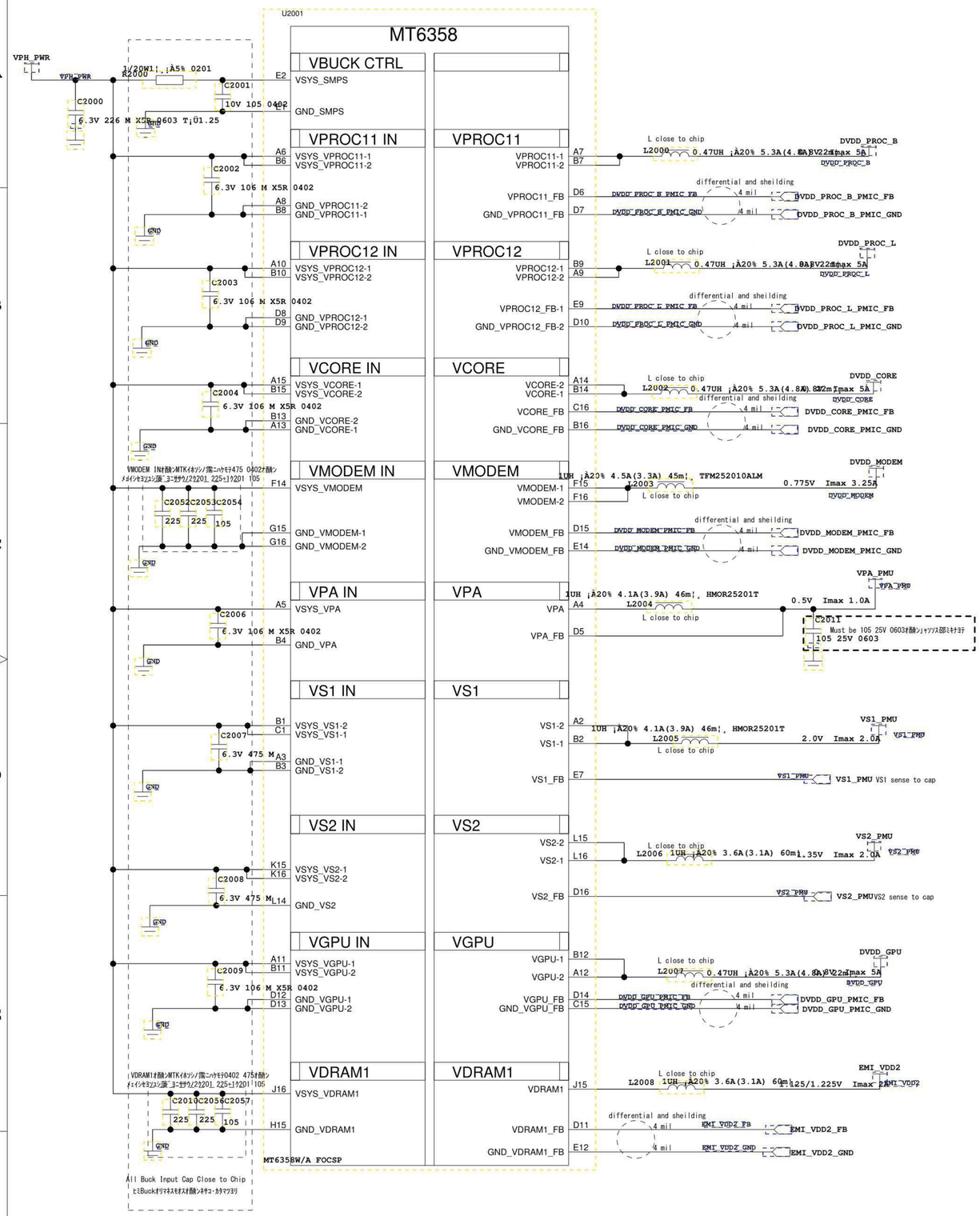


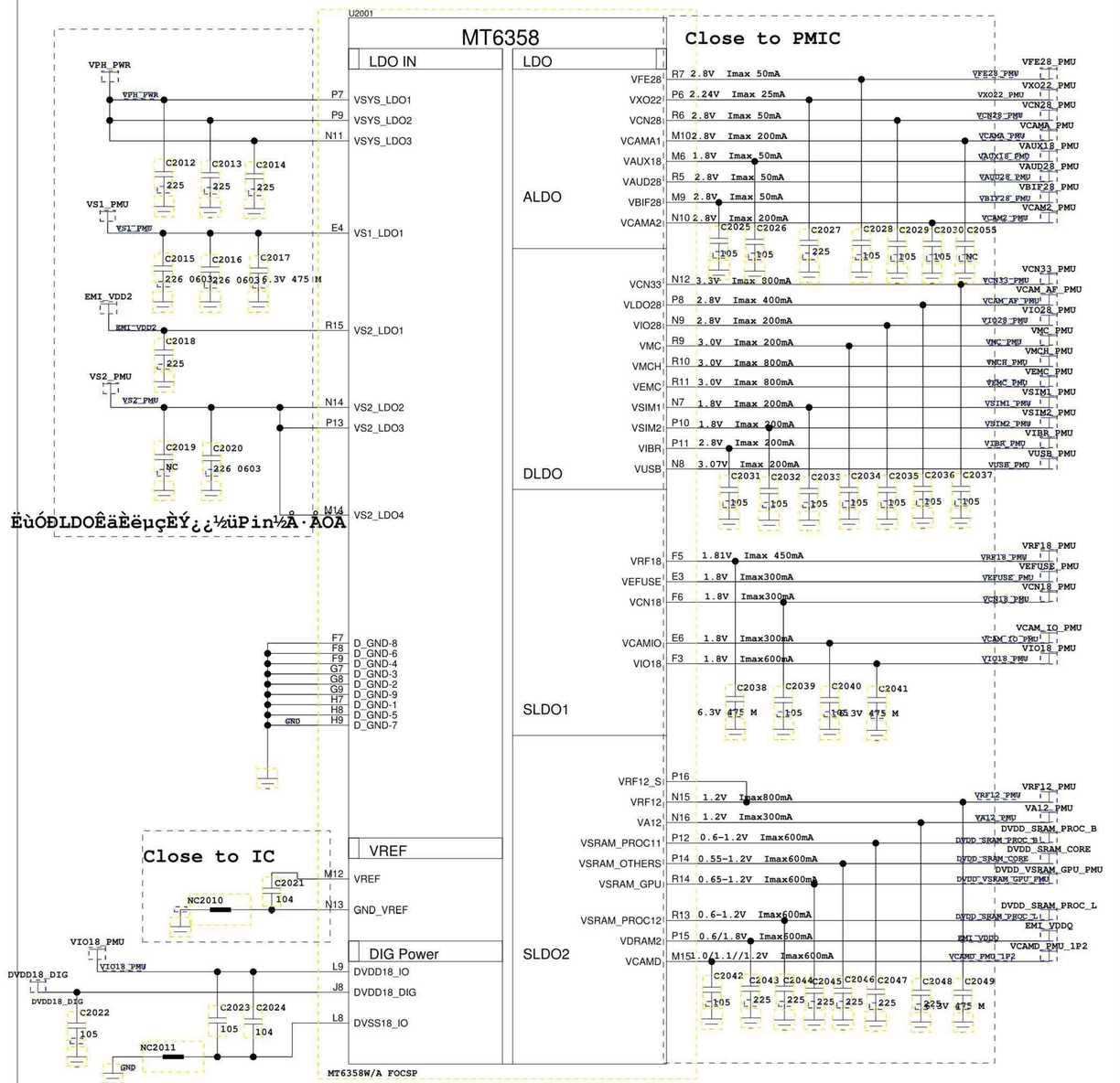
ﾖ蟆竪ｾ	R1907	ｾｵｶﾈ	min(V)	typ(V)	max(V)	R1907ﾁﾏｺﾅ
V1.0(T0)	5.1K	1%	0.0785	0.0873	0.097	8241153
V1.1(EVT)	10K	1%	0.1473	0.1636	0.1816	8241105
V1.2(DVT)	39K	1%	0.4597	0.505	0.554	8241225
V1.3(PVT)	68K	1%	0.668	0.7285	0.793	8241250
V1.4(MP)	100K	1%	0.84	0.9	0.955	8241032



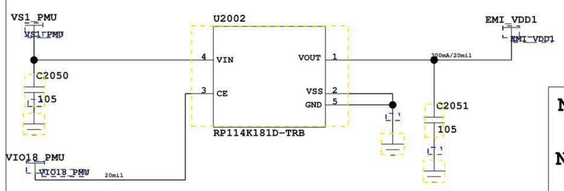
Note 19-1£º

Distance to AP is 5-7mm and away form other heat resource 10-12mm





LDO for EMI_VDD1 of LPDDR4X VDD1

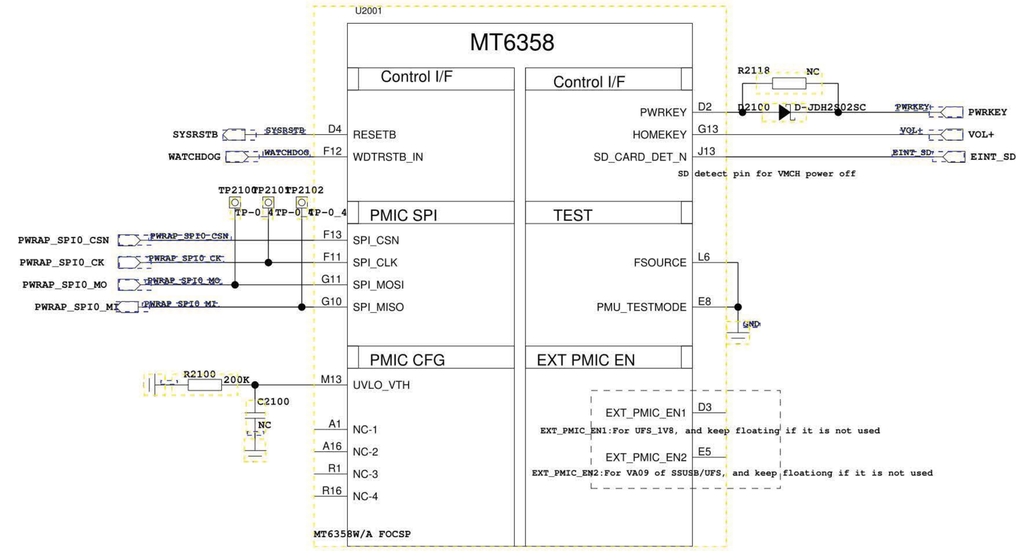


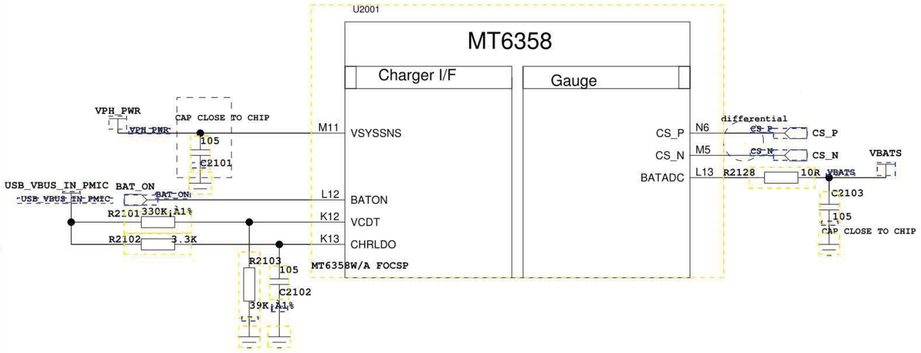
Note 1£º

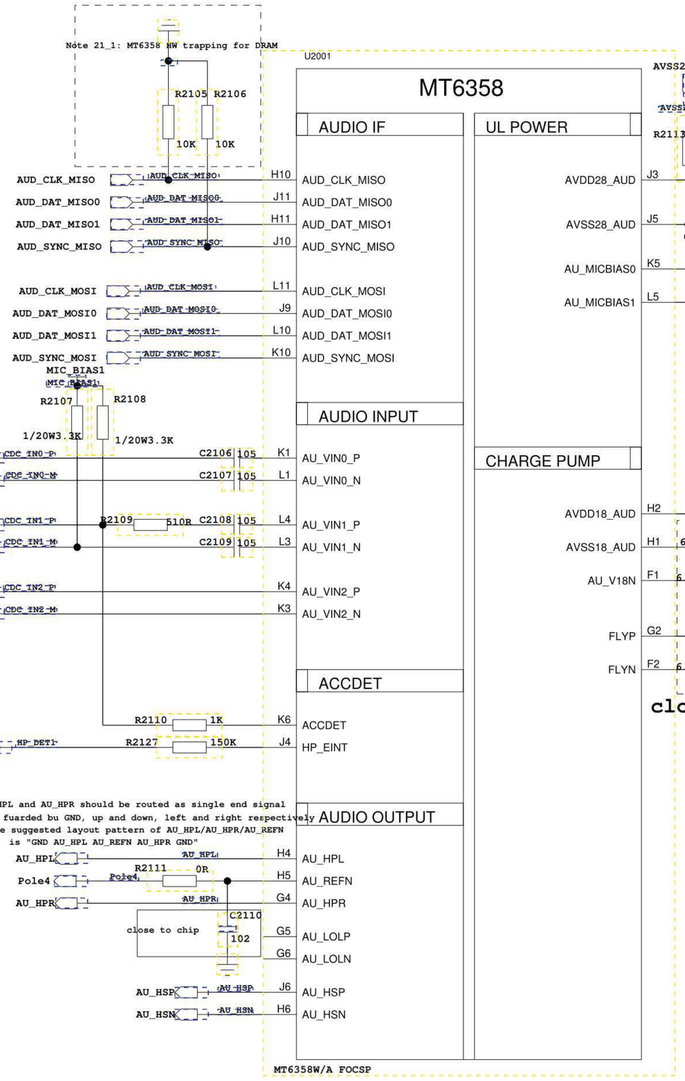
output cap SHOULD be placed even if the LDO is no used. Such as VSRAM_GPU, VDRAM.

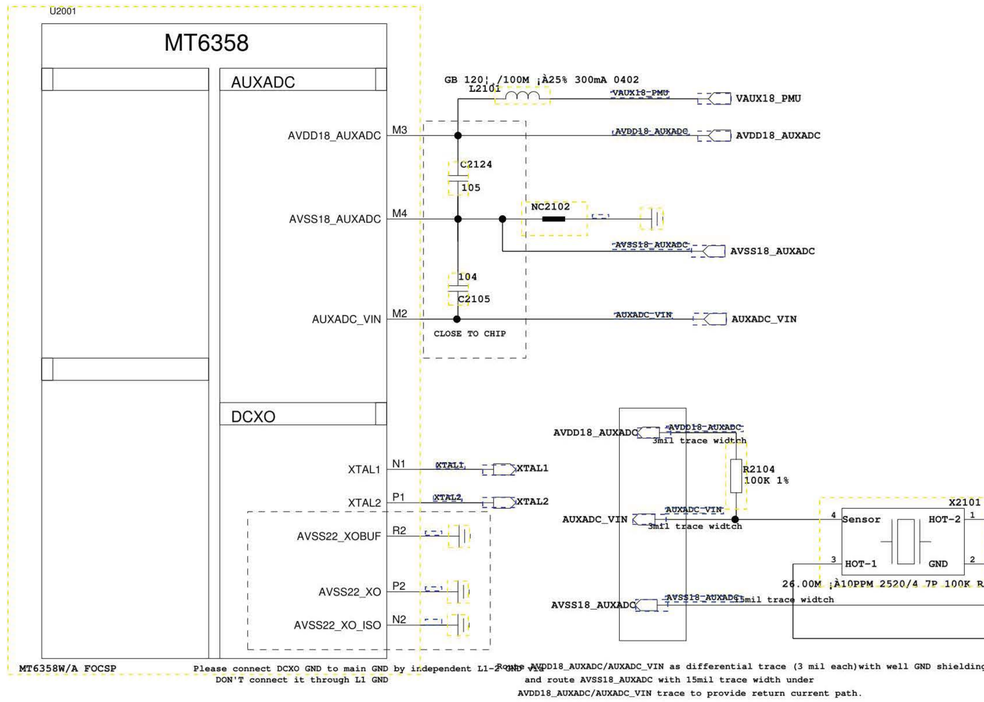
Note 2£º

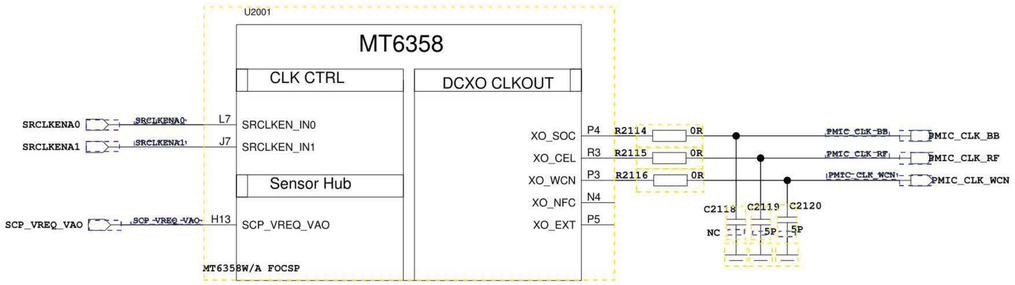
VDRAM from MT6356 is used for LPDDR3 power. Ext. buck is for LPDDR4X.

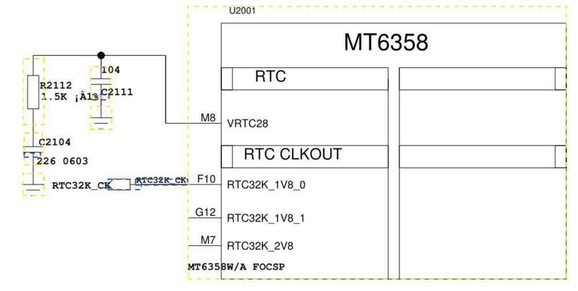

U2001
MT6358
Control I/F
Control I/F
SYSRSTB
WATCHDOG
RESETB
WDTRSTB_IN
PWRKEY
HOMEKEY
SD_CARD_DET_N
SD detect pin for VMCH power off
R2118 NC
D2100 D-JDH2S02SC
TP2100 TP2101 TP2102
PMIC SPI
TEST
PWRAP_SPI0_CSN
PWRAP_SPI0_CK
PWRAP_SPI0_MO
PWRAP_SPI0_MI
SPI_CSN
SPI_CLK
SPI_MOSI
SPI_MISO
FSOURCE
PMU_TESTMODE
GND
PMIC CFG
EXT PMIC EN
R2100 200K
C2100 NC
UVLO_VTH
NC-1
NC-2
NC-3
NC-4
EXT_PMIC_EN1
EXT_PMIC_EN2
EXT_PMIC_EN1:For UFS_1V8, and keep floating if it is not used
EXT_PMIC_EN2:For VA09 of SSUSB/UFS, and keep floationg if it is not used
MT6358W/A FOCSP


U2001
MT6358
Charger I/F
Gauge
VPH_PWR
CAP CLOSE TO CHIP
C2101
VSYSSNS
CS_P
CS_N
BATADC
differential
R2128 10R
VBATS
C2103
USB_VBUS_IN_PMIC
BAT_ON
BATON
R2101 330K ¡Á1%
VCDT
R2102 3.3K
CHRLDO
R2103
C2102
39K ¡Á1%
MT6358W/A FOCSP

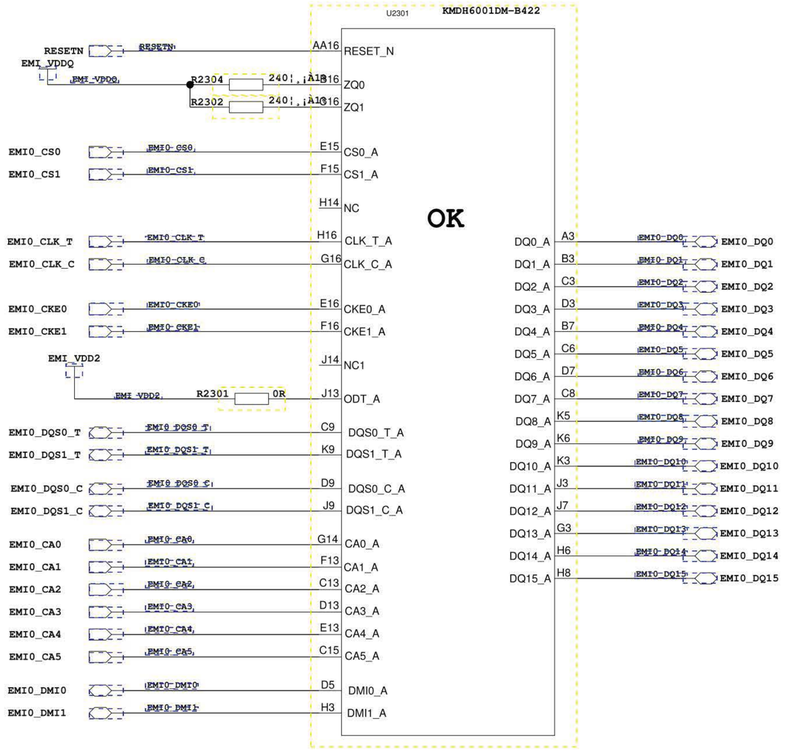

Note 21_1: MT6358 HW trapping for DRAM
R2105 10K
R2106 10K
U2001
MT6358
AUDIO IF
UL POWER
AUD_CLK_MISO
AUD_DAT_MISO0
AUD_DAT_MISO1
AUD_SYNC_MISO
AUD_CLK_MOSI
AUD_DAT_MOSI0
AUD_DAT_MOSI1
AUD_SYNC_MOSI
MIC_BIAS1
R2107 1/20W3.3K
R2108 1/20W3.3K
AUDIO INPUT
CDC_IN0_P
CDC_IN0_M
CDC_IN1_P
CDC_IN1_M
CDC_IN2_P
CDC_IN2_M
C2106 105
C2107 105
C2109 510R
C2108 105
AU_VIN0_P
AU_VIN0_N
AU_VIN1_P
AU_VIN1_N
AU_VIN2_P
AU_VIN2_N
ACCDET
HP_DET1
R2110 1K
R2127 150K
ACCDET
HP_EINT
AUDIO OUTPUT
AU_HPL and AU_HPR should be routed as single end signal
and be fuarded bu GND, up and down, left and right respectively
The suggested layout pattern of AU_HPL/AU_HPR/AU_REFN
is "GND AU_HPL AU_REFN AU_HPR GND"
AU_HPL
Pole4
AU_HPR
R2111 0R
C2110 102
close to chip
AU_HPL
AU_REFN
AU_HPR
AU_LOLP
AU_LOLN
AU_HSP
AU_HSN
MT6358W/A FOCSP
AVSS28_AUD
VAUD28_PMU
R2113 0R
AVDD28_AUD
AVSS28_AUD
AU_MICBIAS0
AU_MICBIAS1
C2112 105
C2113
MIC_BIAS0
C2114 104
MIC_BIAS1
close to chip
CHARGE PUMP
VIO18_PMU
line width 20mil
AVDD18_AUD
AVSS18_AUD
AU_V18N
FLYP
FLYN
C2115
C2116 6mil 225
NC2101 NC-0R
GND
C2117
6.3V 475 M
1. AVSS18_AUD is connected to GND with very short trace
2. AVSS18_AUD is connected to de-couple cap of AVDD18_AUD and AU_V18N with 6
trace respectively
close to chip


U2001
MT6358
AUXADC
DCXO
GB 120¦¸/100M ¡Á25% 300mA 0402
L2101
AVDD18_AUXADC
AVSS18_AUXADC
AUXADC_VIN
VAUX18_PMU
VAUX18_PMU
AVDD18_AUXADC
AVSS18_AUXADC
C2124 105
NC2102
C2105 104
CLOSE TO CHIP
XTAL1
XTAL2
AVSS22_XOBUF
AVSS22_XO
AVSS22_XO_ISO
R2104 100K 1%
3mil trace width
X2101
Sensor
HOT-2
HOT-1
GND
26.00M ¡Á10PPM 2520/4 7P 100K RA
15mil trace width
MT6358W/A FOCSP
Please connect DCXO GND to main GND by independent L1-2 GND via
DON'T connect it through L1 GND
Route AVDD18_AUXADC/AUXADC_VIN as differential trace (3 mil each)with well GND shielding
and route AVSS18_AUXADC with 15mil trace width under
AVDD18_AUXADC/AUXADC_VIN trace to provide return current path.

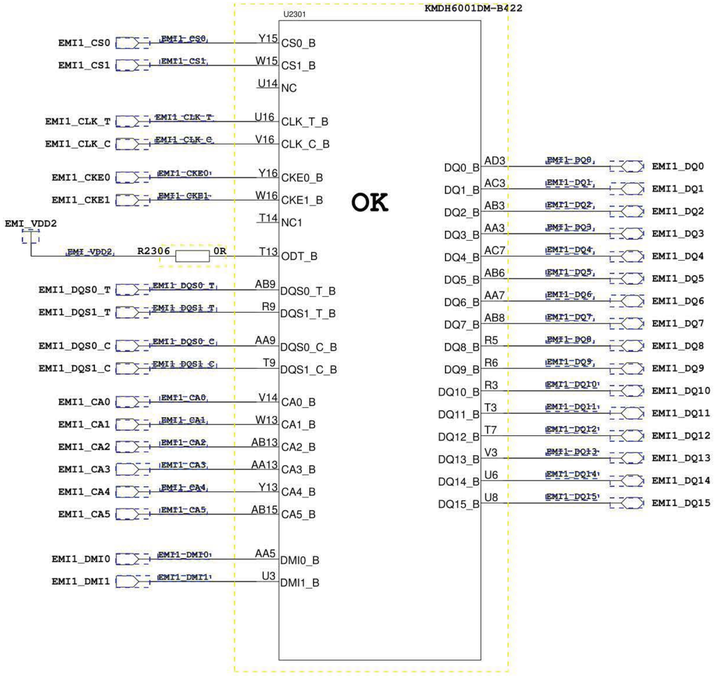

U2001
MT6358
CLK CTRL
DCXO CLKOUT
SRCLKENA0
SRCLKENA1
SRCLKEN_IN0
SRCLKEN_IN1
Sensor Hub
SCP_VREQ_VAO
XO_SOC
XO_CEL
XO_WCN
XO_NFC
XO_EXT
R2114 0R
R2115 0R
R2116 0R
PMIC_CLK_BB
PMIC_CLK_RF
PMIC_CLK_WCN
C2118 NC
C2119 5P
C2120 5P
MT6358W/A FOCSP


U2001
MT6358
RTC
RTC CLKOUT
VRTC28
RTC32K_1V8_0
RTC32K_1V8_1
RTC32K_2V8
R2112 1.5K ¡Á1%
C2111 104
C2104 226 0603
RTC32K_CK
MT6358W/A FOCSP

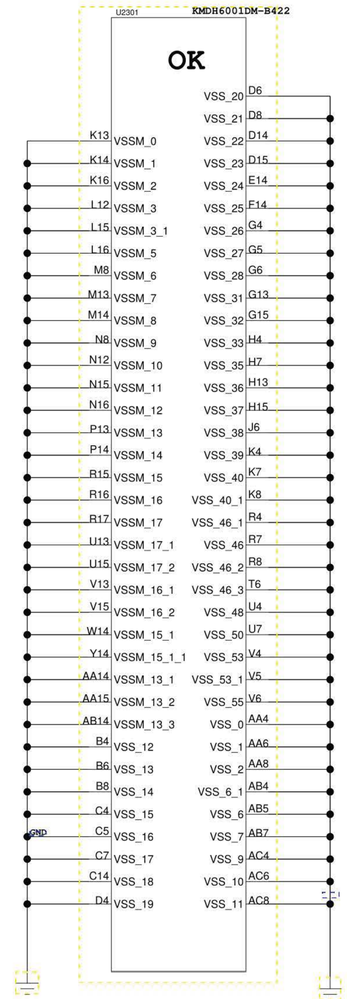
EMCP_EBI0



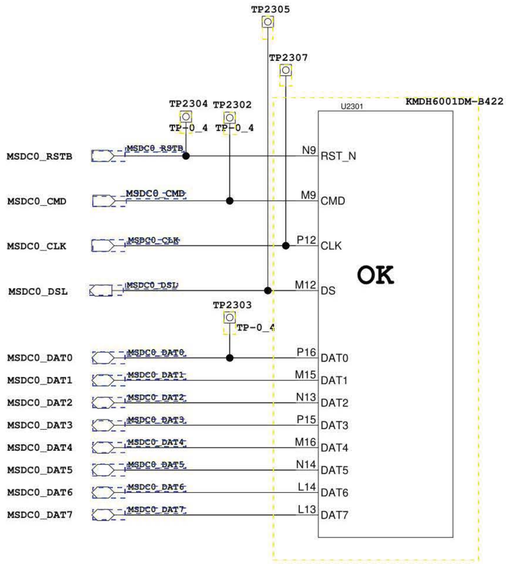
EMCP_EMI1



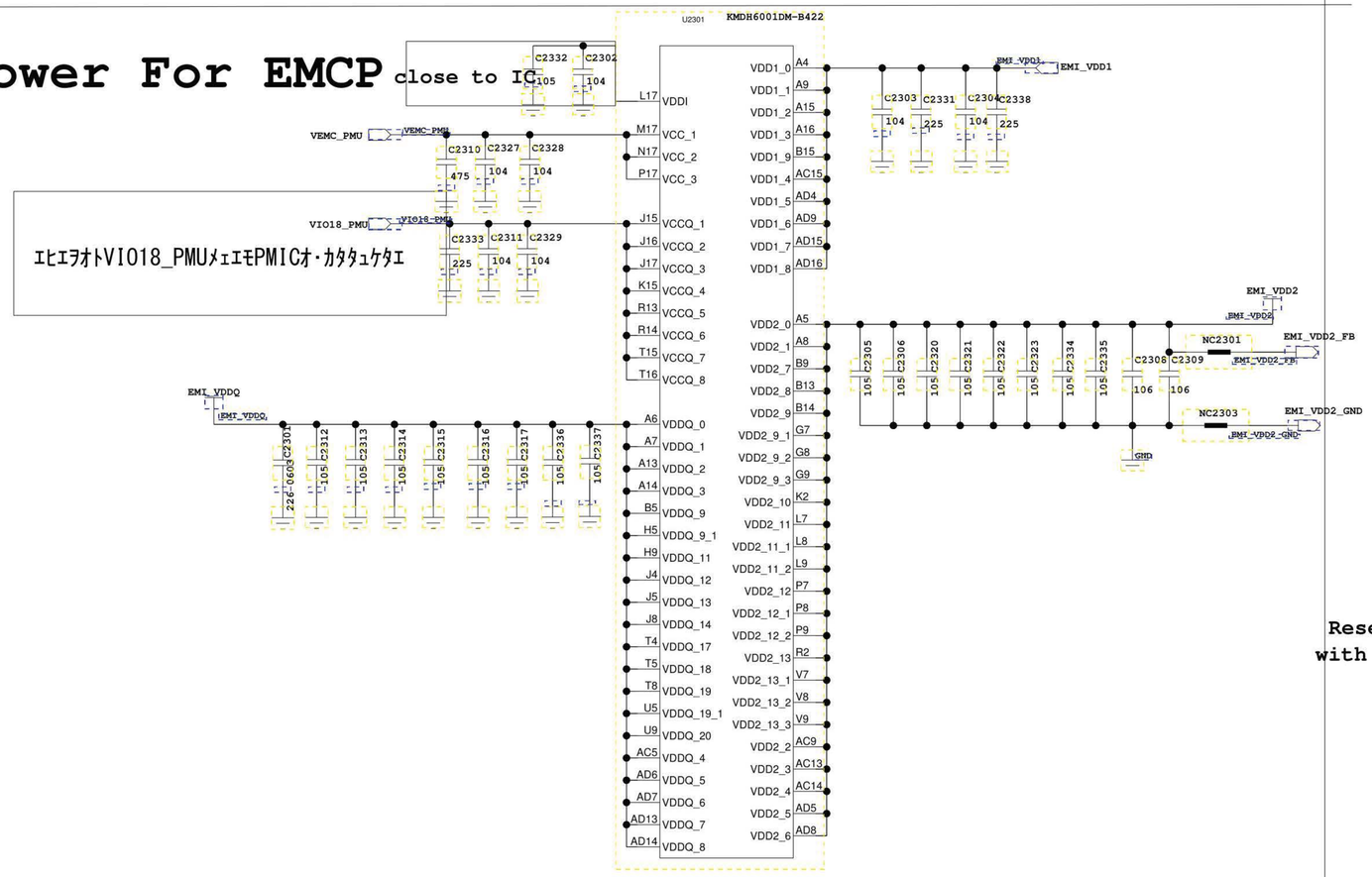
EMCP_GND

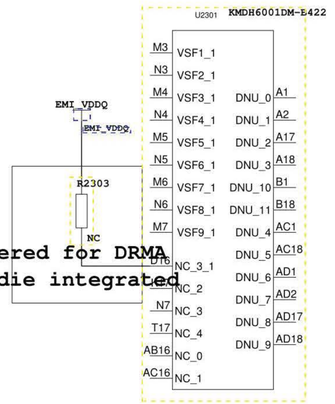


EMCP_SDC



Power For EMCP

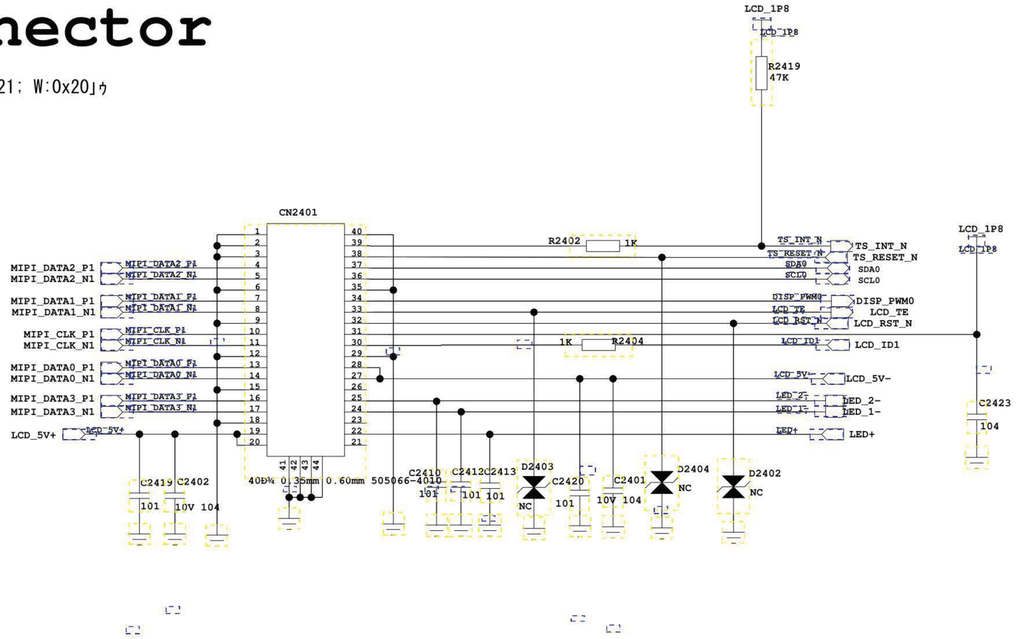




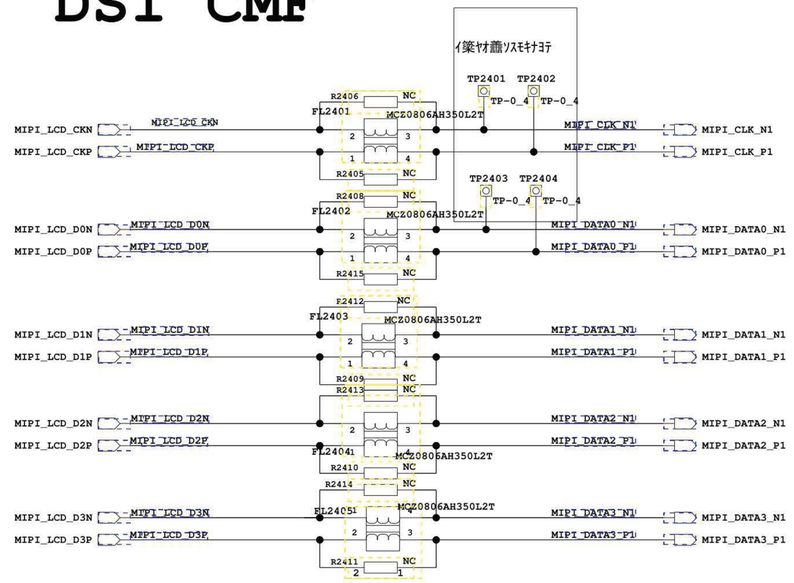
Reservered for DRMA
with 3-die integrated

LCM Connector

TD4310 IIC address｣ｲR:0x21; W:0x20｣ｳ



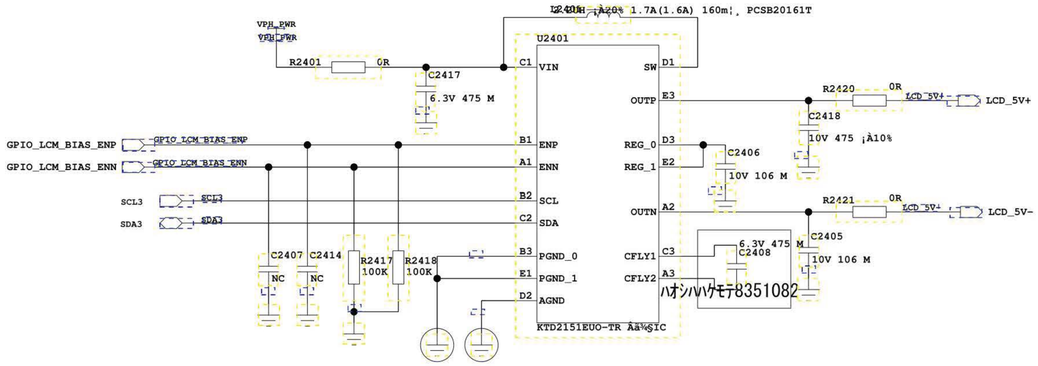
DSI CMF



LCD ｡ﾀ5V Driver

KTD2151 I2C address｣ｲR:0x7D; W:0x7C｣ｳ

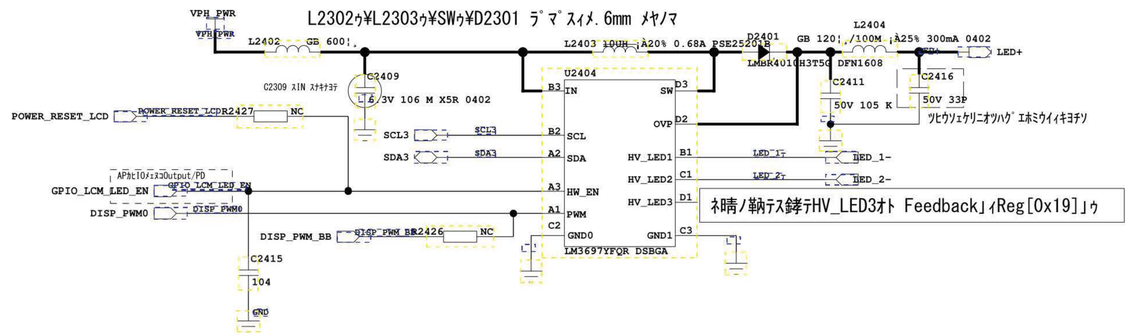
ﾂ贏ｧIC｣ｬﾗ｢ﾒ箏シセヨホサヨテモヲチヲ



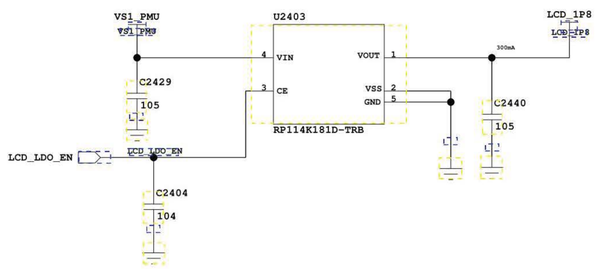
ｵ醸ｴｵﾘﾄ」ﾄ箏ﾘｷﾖﾘｿｪﾏﾂﾖﾘ

LCD BL

LM3697 I2C address｣ｲR:0x6D; W:0x6C｣ｳ

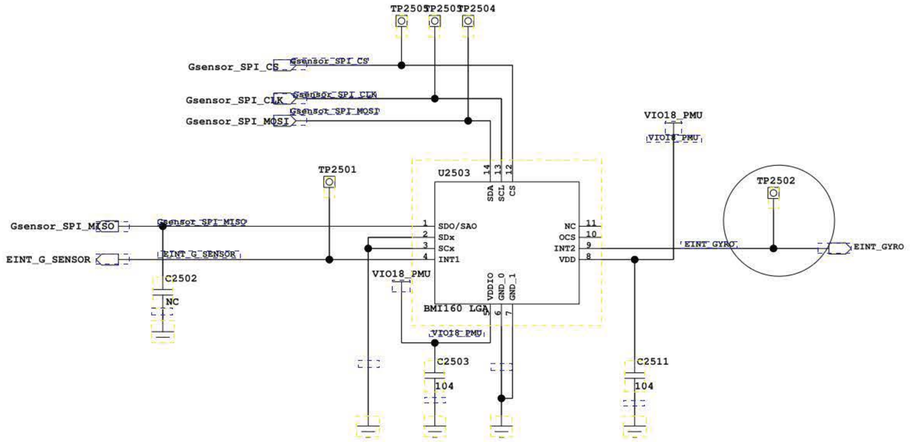


LCD IO LDO



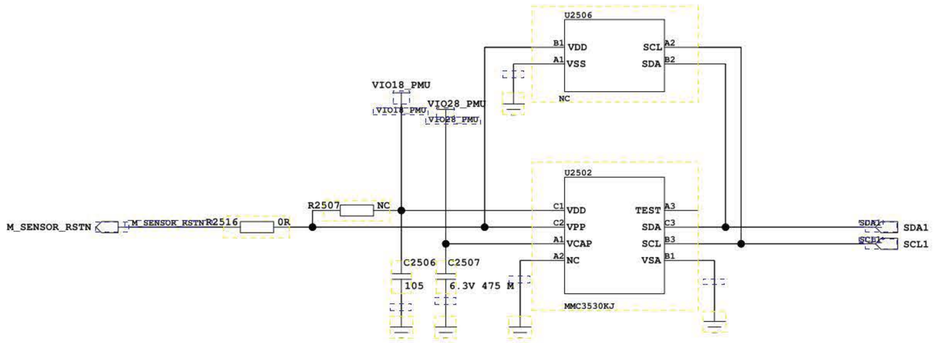
G-Sensor

LIS3DH I2C Address (R:0x33; W:0x32)



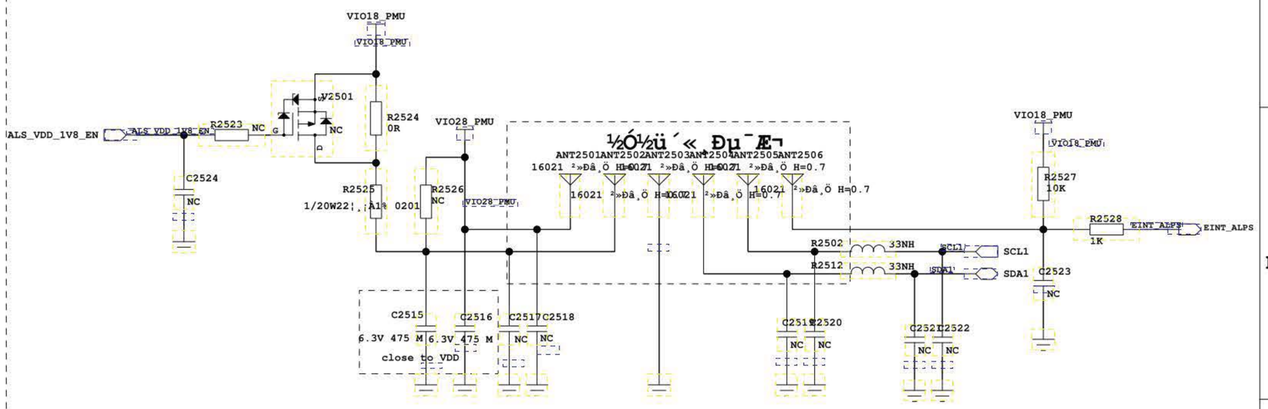
M Sensor

AK09911 I2C Address (R:0x19; W:0x18)

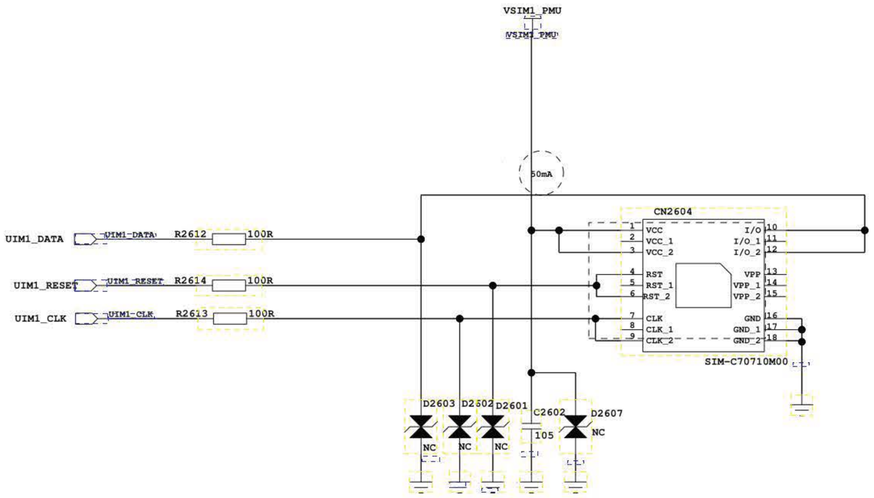


A.L.S.+P.S sensor

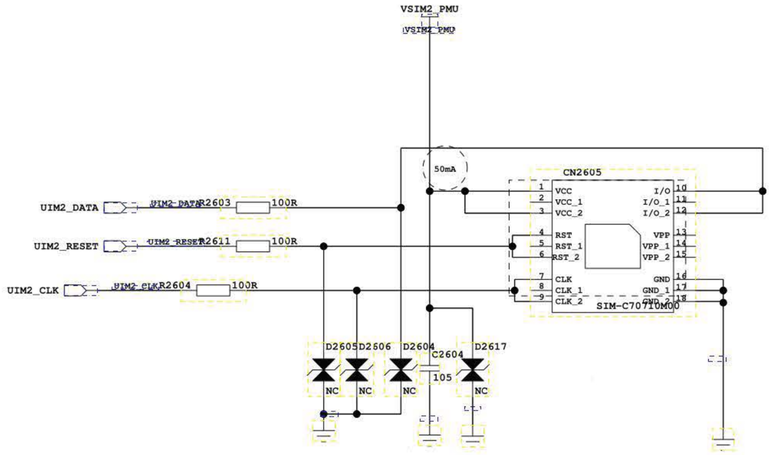
APDS9922 I2C Address (R:0xA7; W:0xA6)



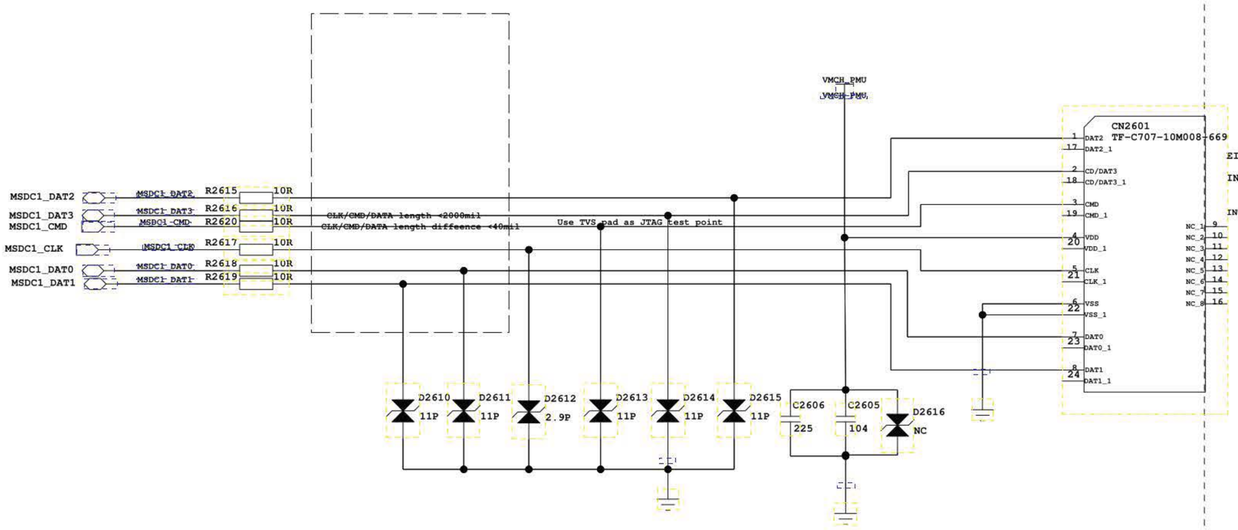
SIM1 Card



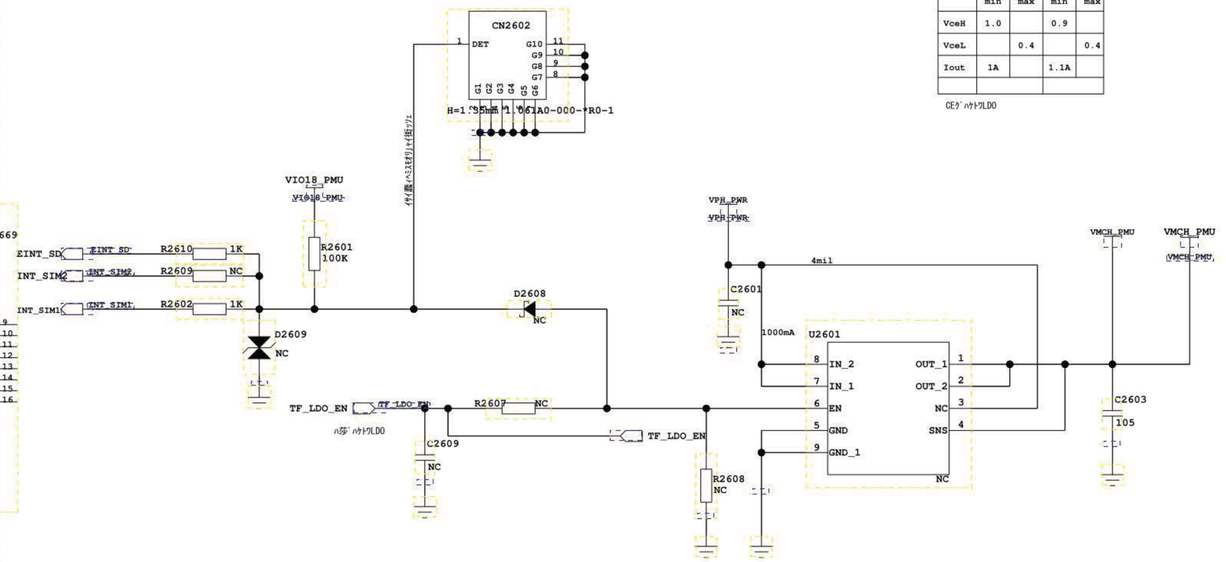
SIM2 Card



TF_CARD



Hot plug¿¨ Ext 2.95V Supply



	RP115L301D 9170125		NCP706A 9170224	
	min	max	min	max
VceH	1.0		0.9	
VceL		0.4		0.4
Iout	1A		1.1A	

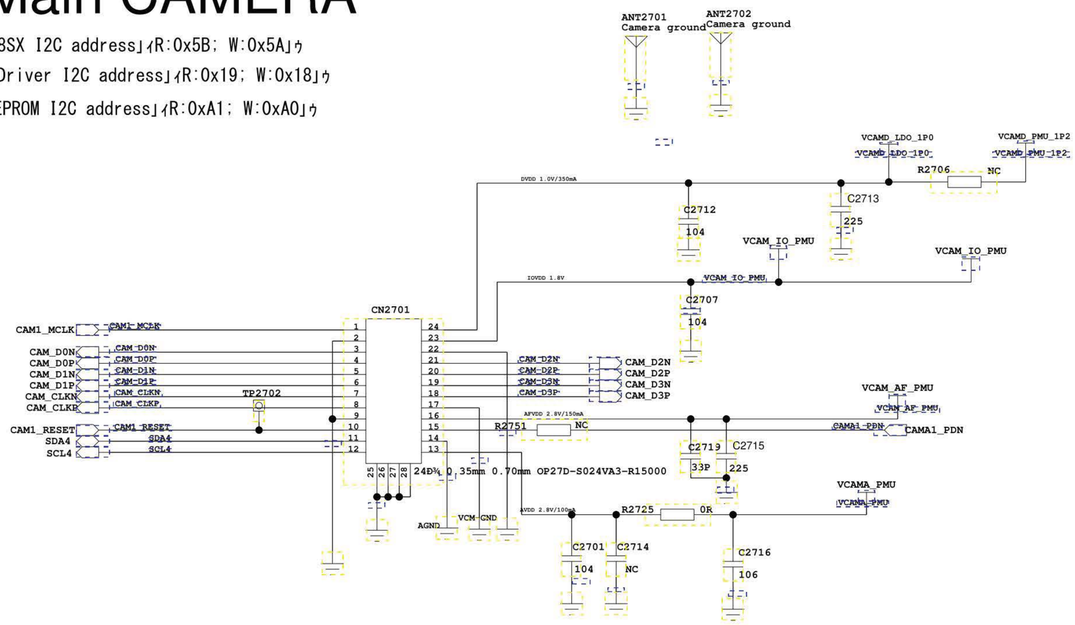
CE¿¨ ¤Ä¤ê¤ÏLDO

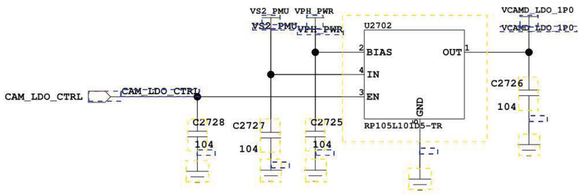
Main CAMERA

3P8SX I2C address」(R:0x5B; W:0x5A」)

AF_Driver I2C address」(R:0x19; W:0x18」)

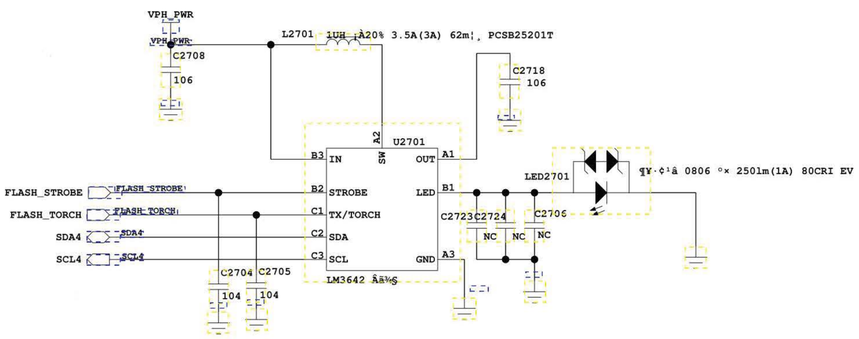
EEPROM I2C address」(R:0xA1; W:0xA0」)



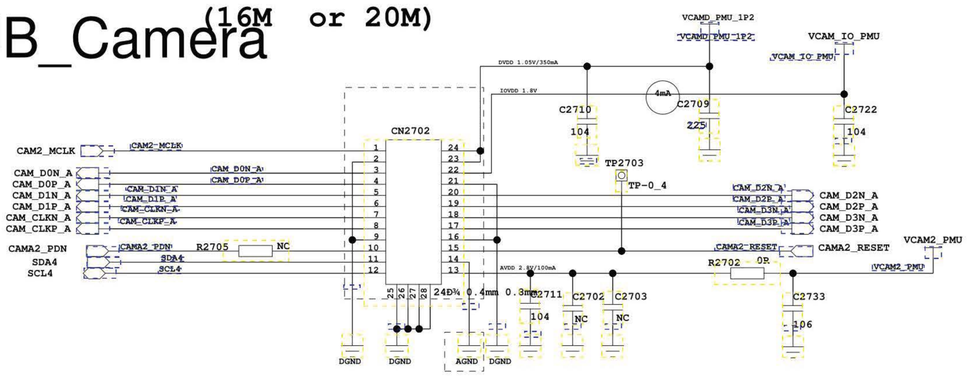


Flash LED Driver

MP3331 slave Address is 0x0X67

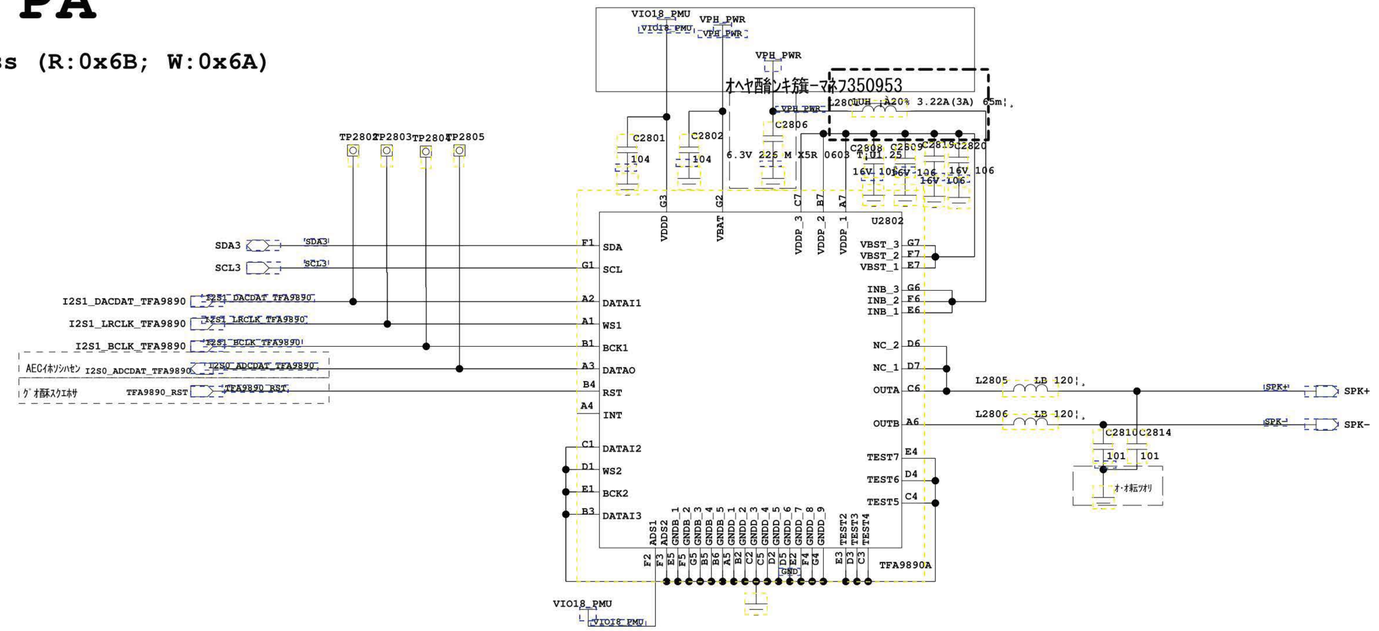


SUB_Camera (16M or 20M)

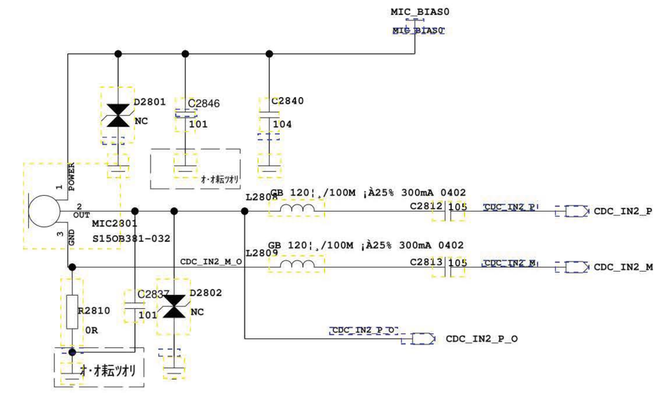


SMART PA

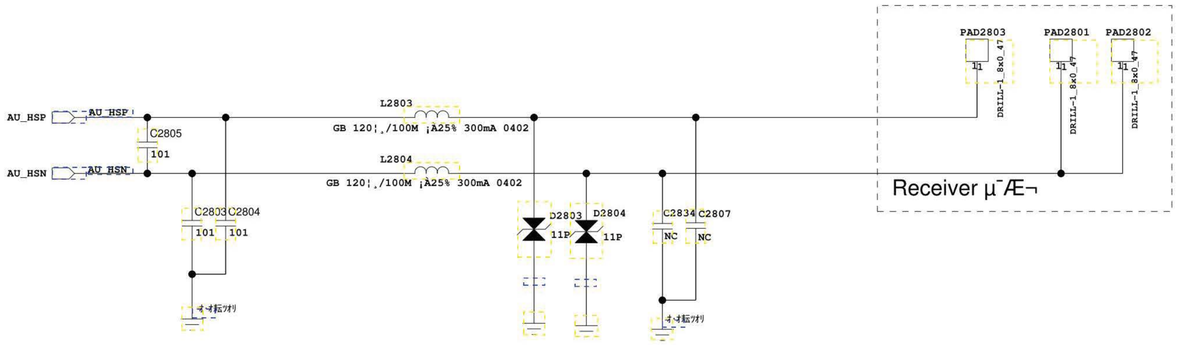
TFA9890A I2C Address (R:0x6B; W:0x6A)



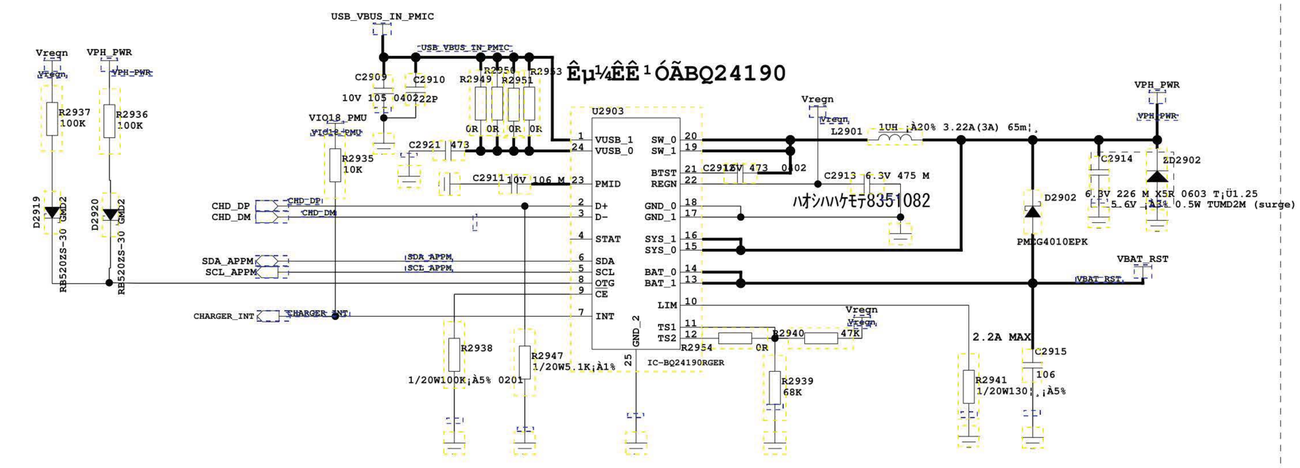
Ant-Noise MIC



Receiver

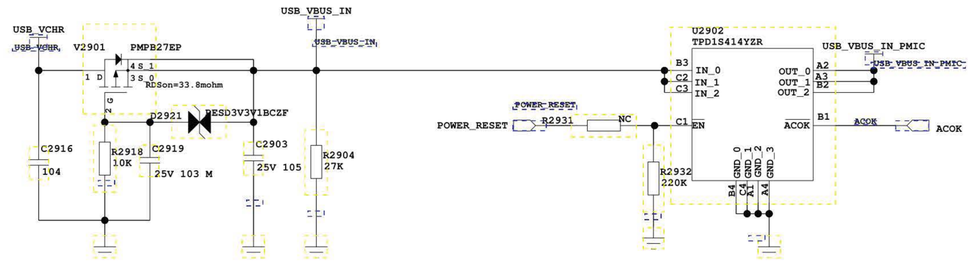


ternal Switching Charge

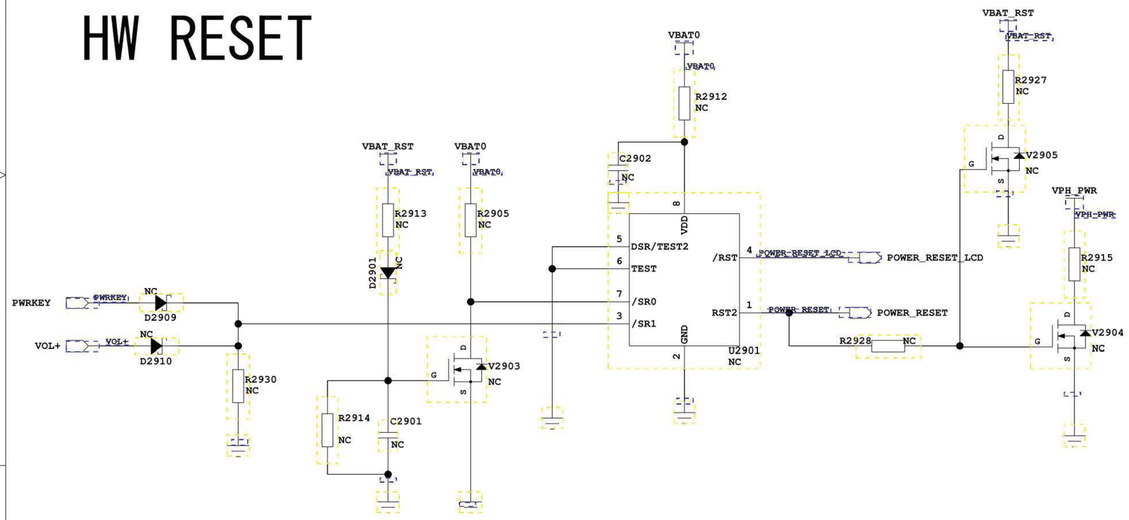


PIN control dual state

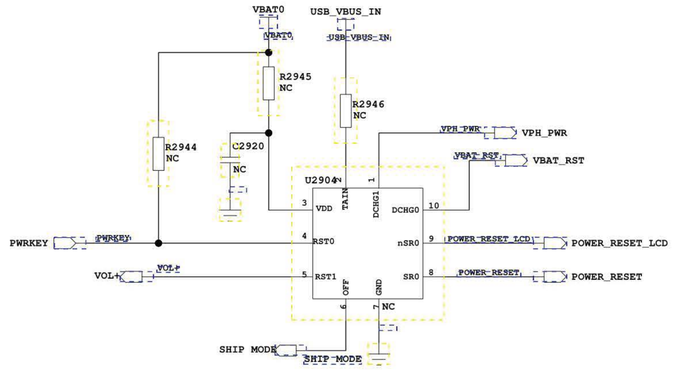
NVP&OVP



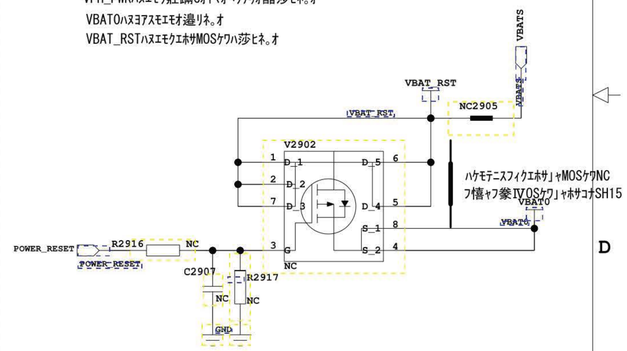
HW RESET



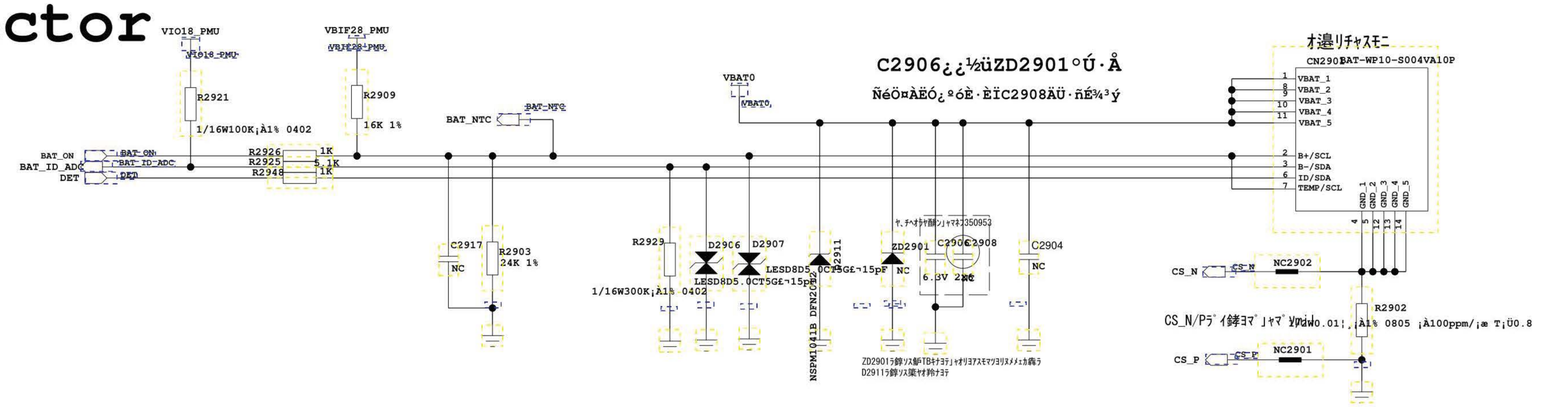
´øSHIP MODE ¸´Î»µçÂBAT_MOSFET

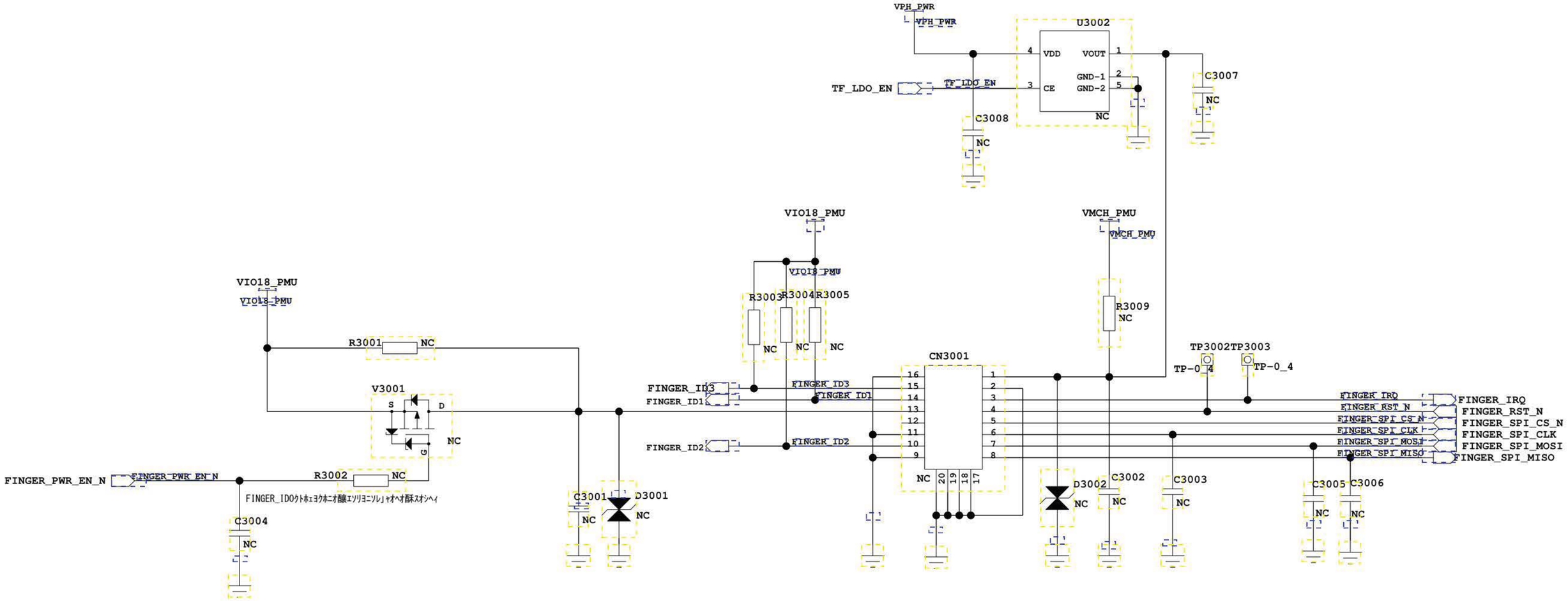


VPH_PWRﾊﾇｴﾓｳ莊蹣Cｵﾄﾏｵﾍｳｹｳｵ醋莎ﾋﾈ。ｵ
VBAT0ﾊﾇｴﾓｱﾇｽﾓｴﾓｵ邉リﾈ。ｵ
VBAT_RSTﾊﾇｴﾓｳｹｴﾓｻMOSｹｳﾊ莎ﾋﾈ。ｵ

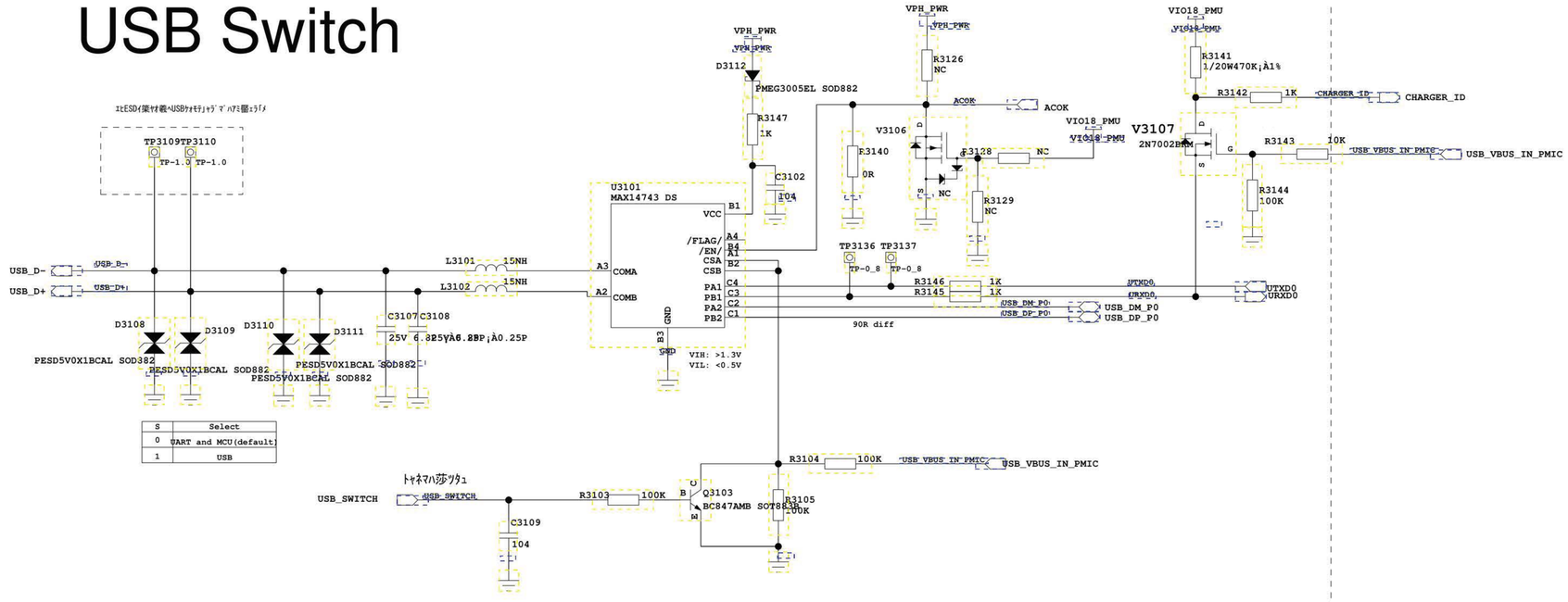


Battery Connector




VPH_PWR
VPH_PWR
U3002
VDD
VOUT
GND-1
GND-2
CE
NC
TF_LDO_EN
TF_LDO_EN
C3008
NC
C3007
NC
VIO18_PMU
VIO18_PMU
R3003
R3004
R3005
NC
NC
NC
VMCH_PMU
VMCH_PMU
R3009
NC
TP3002
TP3003
TP-0_4
TP-0_4
CN3001
FINGER_ID3
FINGER_ID1
FINGER_ID2
FINGER_IRQ
FINGER_RST_N
FINGER_SPI_CS_N
FINGER_SPI_CLK
FINGER_SPI_MOSI
FINGER_SPI_MISO
VIO18_PMU
VIO18_PMU
R3001
NC
V3001
S
D
G
NC
FINGER_PWR_EN_N
FINGER_PWR_EN_N
R3002
NC
FINGER_IDOクトホェヨクホニオ醸エソリヨニソル」ャオへオ酉ホスオシヘィ
C3004
NC
C3001
NC
D3001
NC
D3002
NC
C3002
NC
C3003
NC
C3005
NC
C3006
NC

USB Switch



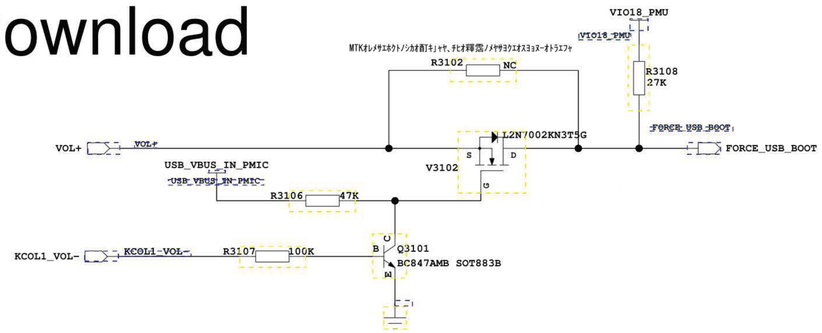
Screw Hole

TOP	BOTTOM	
	SH5 RF-PA WJ-DC023-RF-SHIELDING	
SH1 BB-MCP WJ-DC023-BB-SHIELDING	SH6 PMU WJ-DC023-PMU-SHIELDING	SH10 sub MIC WJ-DC023-SUB-MIC-FRAME
SH2 Flash Driver WJ-DC023-FLASH-DRV-SHIELDING	SH7 GPS WJ-DC023-GPS-SHIELDING	SH11 Battery BTB WJ-DC023-BTB-HOLDER-BUCKLE-SMT
SH3 Charger IC WJ-DC023-CHG-SHIELDING	SH8 Flash LED WJ-DC023-FLASH-LED-FRAME	SH12 Battery BTB 2 WJ-DC023-SMT
SH4 T Card 8.2¡Á1.5¡Á0.25 Ã×ÇáÍ- ¶Æ¾Ø	SH9 RF1117/9 turner shielding WJ-DC023-TUNNER-SHIELDING	SH13 Fringer BTB WJ-DC023-FING

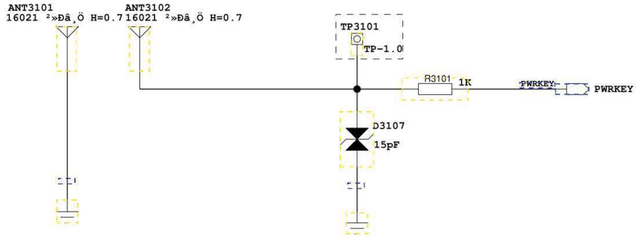
SH14 Instead VBAT MOS WJ-DC099
SH15 WJ-DC023-VBAT
SH16 DC089 Ño°×Í- WJ-DC089

FORCE USB Download

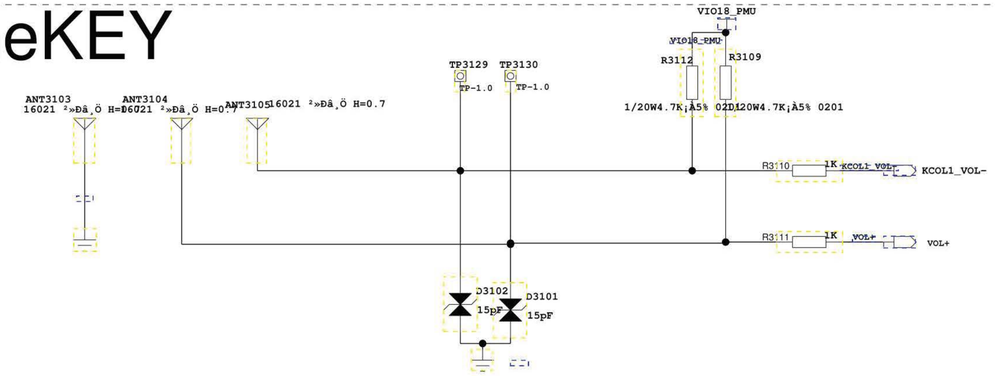
MTKニスフィヌソヨニマツヤリオ酉丁キ



POWERKEY



VolumeKEY



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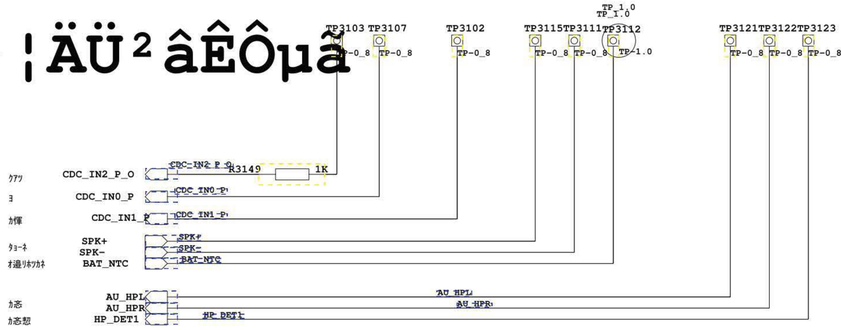
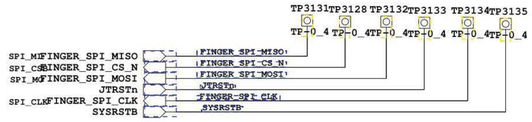
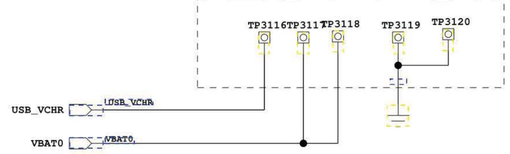




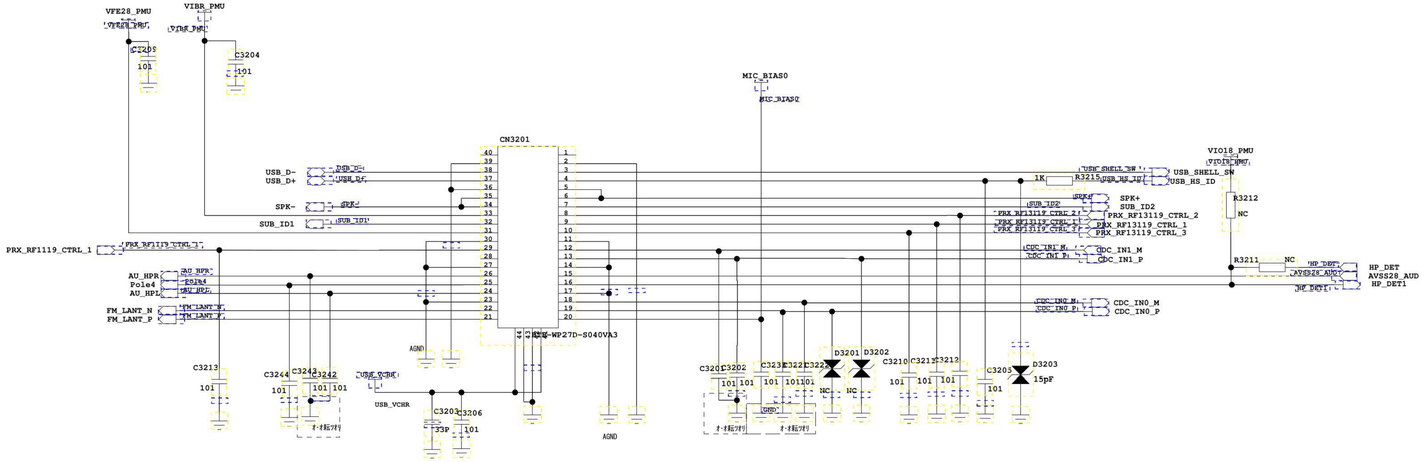
PWRKEY/UARTO寸舞ミ¿菜衬
KPCOL0±メリーイ菜衬

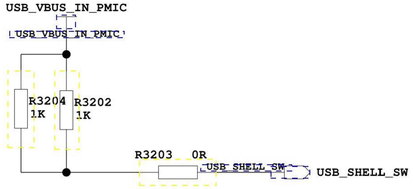
debug IO ¾¡Á¿·ÅÔÚÒ»Æð

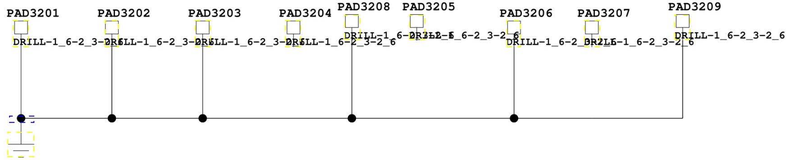
TEST POINT

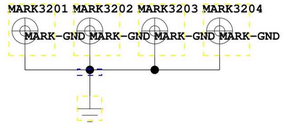


FPC CONNECT BTB









Primary TX&RX antenna

Diversity RX antenna

DPDT
RF1646C

RF1658
RF1658 QFN

RX

Transiver
MT6177

WBIQ

RFIQ

MT6771

SKY77916

TX/RX

BSI ctr

BSI ctrl

TX/RX

QM56022

TX/RX

26M
PMU CLK

SYSRSTB

WATCHDOG

PWRAPSPI

Audio SPI

MT6358

PWRKEY

26M
PMU CLK

Receicer

Main MIC

SUB MIC

Headset MIC

Audio

BUCK

LDO

Vibrator

MOTOR
VPH_PWR

32K

RC OSC

BT/WIFI/GPS antenna

26M PMU CLK

Combiner

GPS RX SAW

WIFI

MT6631

WB

WBIQ

WBIQ

GPS

GPSIQ

GPSIQ

SPI1

G-sensor

LIS3DH

I2C1

I2C1

ALS+PS

TMD27253

M-sensor

AK09911C

RESET IC

LM3642

I2C4

I2C4

Main Camera

Sub Camera

BQ24190

MOS
PMPB15XP

MCP

EBI_IF

EBI_IF

MSDC0

MSDC0

I2C5

I2C5

UART

USB

USB switch

USB

OVP

CODEC
MT6358

headphone

AUDSP

AUDSPI

TFA9890A

I2C3

I2C3

TPS65132

LM3697A

Smart PA
TFA9890A

SPEAKER

I2S

I2S

I2C0

I2C0

LCM&TP

LCD

MIPI

MSDC1

SIM2

SIM1

MSDC1

SIM1

SIM2

SIM&T Card